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Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness Management Plan

Sawtooth National Forest, Sawtooth National Recreation Area
BLM Idaho Falls District, Challis Field Office

August 9, 2018



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Cover Photo Description: Castle Peak reflects into upper Chamberlin Lake in the Cecil D. Andrus-White Cloud Wilderness. Photography © Mark Lisk

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Decision Record
for the
Hemingway-Boulders and Cecil D. Andrus-White Clouds
Wilderness Management Plan
Bureau of Land Management
Challis Field Office

Environmental Assessment: DOI-BLM-ID-I030-2016-0003-EA

INTRODUCTION

The Environmental Assessment (EA) discloses the environmental impacts of a wilderness management plan for the Hemingway-Boulders (HB) Wilderness and Cecil D. Andrus-White Clouds (CDAWC) Wilderness. These Wilderness areas were designated through the passage of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act (P.L. 114-46).

This decision record will implement the Wilderness Management Plan (WMP) for the Bureau of Land Management (BLM) portion of the CDAWC Wilderness. The WMP will provide the primary management approach to preserve wilderness character as identified by the Wilderness Act of 1964.

The EA has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA, 40 CFR 1500-1508). Public involvement opportunities occurred throughout the planning process.

PURPOSE AND NEED

The purpose of this project is to preserve wilderness character as identified by the Wilderness Act within the two wilderness areas, situated on federal public land managed by the BLM. Per the Wilderness Act of 1964 (Section 4), "... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area." Although wilderness character is a complex idea and is not explicitly defined in the Wilderness Act, the qualities of wilderness character are commonly described as:

- Untrammeled—Area is unhindered and free from intentional actions of modern human control or manipulation.
- Natural—Area appears to have been primarily affected by the forces of nature and are substantially free from the effects of modern civilization.
- Undeveloped—Area is essentially without permanent improvements or the sights and sounds of modern human occupation, and it retains its primeval character.
- Outstanding opportunities for solitude or a primitive and unconfined type of recreation—Area provides outstanding opportunities for people to experience solitude or primeval and unrestricted recreation including the values associated with physical and mental inspiration, challenge, self-reliance, self-discovery, and freedom.
- Other Features of Value—Area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. Though not required of any wilderness, these characteristics, if present, must be protected as rigorously as any of the other four required qualities.

The need for the project is to identify the conditions and opportunities for which the Wilderness areas would be managed and to create specific direction for managing resources and activities that would bring existing conditions closer to meeting desired conditions. The need for the action is to address preservation and protection of wilderness character, and specifically:

- Preserve the untrammeled quality by minimizing actions that intentionally manipulate the earth and its community of life;
- Protect wildlife:
 - reduce risk of disease transmission to bighorn sheep;
 - minimize recreation conflict with wildlife species;
 - preserve important habitat for a wide array of fish and wildlife species;
- Manage recreation:
 - minimize impacts of large groups on wildlife, vegetation, and opportunities for solitude;
 - educate visitors on a variety of topics to minimize user impacts;
- Protect vegetation:
 - protect sensitive riparian and alpine vegetation, including whitebark pine, by managing campfire use and recreational stock use;
- Preserve the undeveloped nature of the wilderness by managing developments and human intrusions;
- Preserve opportunities solitude or primitive and unconfined recreation.

Additionally, the signing of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act (Public Law 114-46) changed the management direction of these areas. This Act states “IN GENERAL.- Subject to valid existing rights, each wilderness area shall be administered by the Secretary in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.)...” P.L. 114-46 requires: “Not later than 3 years after the date of enactment of this Act, the Secretary of Agriculture and the Secretary of Interior shall collaboratively develop wilderness management plans for the wilderness areas.”

CHANGES BETWEEN THE DRAFT WMP, EA AND THIS DECISION

A number of changes were made to the EA following distribution of the draft WMP. These changes are reflected throughout the EA and are summarized below. The changes reflect consideration of public comments on the proposed plan and EA and its effects upon wilderness character, and ensured that the analysis included the best scientific information. I do not believe that the edits and corrections necessitate issuance of another WMP or other form of document for comment. The updated information disclosed in the EA falls within the scope of the analysis depicted in the draft WMP and in most cases simply provides additional clarity. Direction numbers in this list reference the April 2018 version of the WMP. In addition to minor edits and corrections, the following changes were made:

- The name of the White Clouds Wilderness was updated to: Cecil D. Andrus-White Clouds Wilderness as directed in Consolidated Appropriations Act, 2018 (Public Law 115-141).
- Added language to the plan: The direction in the plan would apply within the final surveyed boundaries. (WMP Section 5)
- Added language: Per wilderness law and policy, access associated with hunting, fishing, and trapping is limited to non-motorized and non-mechanized means and is allowable as long as the trapper does not commercially sell the fur, hides, or other parts of the trapped animal. (WMP Section 5) Deleted Standard specific to hunting, trapping from the Recreation section.
- Revised Special Uses language for extent necessary from “restriction” to “recognition.” (WMP Section 5)

- Replaced “A strong local population of bull trout exists within the upper Warm Springs Creek watershed.” with “Migratory and resident bull trout use Warm Springs Creek, the East Fork Salmon River, and their tributaries for spawning and rearing.” (WMP Section 6.5)
- Inserted “factors including, but not limited to” into the causal factors for negative impacts. (Section 6.6)
- Revised the MA Description for Wildlife Resources to reference species management plans in a general manner. (Section 6.9)
- Added into the MA Description for Recreation Resources: The agencies acknowledge the MOU between Regions 1, 4, and 6 of the USFS, the Idaho State BLM office and the IOGLB. Agencies will work with the Licensing Board to manage commercial services within the Wilderness, such as when undertaking the needs assessment through the land use plans. (Section 6.10) Also, added IOGLB to Acronyms. Added MOU with IOGLB to references.
- Revised paragraph in MA Description for Recreation Resources to read: Six outfitters hold priority use permits for operations in the Cecil D. Andrus-White Clouds Wilderness, five are administered by the Sawtooth NRA, and one by the Challis Field Office. They offer guided hiking, mountain climbing, skiing, horse packing, hunting, and fishing opportunities. Of these, three also operate in the Hemingway-Boulders Wilderness. Two assigned outfitter campsites are located in the White Clouds Wilderness and one is in the Hemingway-Boulders Wilderness. These sites have some development, including tent and stock structures. Temporary use outfitting and guiding occurs in these areas as well. The type and amount of temporary outfitter and guide use varies from year to year. (WMP Section 6.10)
- Added to Wilderness Goal 2109: National Historic Preservation Act protocols will be followed. (WMP Section 7.1)
- Revised minimum requirements analysis direction (2122, added Guideline 2123), revised glossary definition, and moved several standards to guidelines (2122, 2124, 21116, 21154). (WMP Sections 7.1, 7.14, 7.19)
- Revised wording of Wilderness Goals 2103, 2109, Scenic Environment Objective 2194, and a Zone 2 Desired Condition to use the terms preserve or protect, in lieu of enhance. (WMP Sections 7.1., 7.11, and 7.21.1)
- Reword of Wilderness Guideline 2124: Allow natural processes to dominate and maintain ecosystem functions, including natural restoration. Where human activities have substantially degraded the wilderness condition, active management may be considered to restore wilderness character. In addition to an MRA, the Framework for Evaluating Ecological Intervention (or most current) is a valuable method that may be used for evaluating necessary and appropriate action. (WMP Section 7.1) Added “Framework for Evaluating Ecological Intervention in Wilderness” into references.
- Revised Wildlife Resources Objective 2152: When federal and State agencies agree removing fish is necessary for protecting and improving wilderness character, removal may occur, contingent upon an MRA and NEPA analysis, as required. (WMP Section 7.9)

- Changed name of East Fork Herd Home Range to Pack Goat Exclusion Area for accuracy in Wildlife Resources Standard 2155. (WMP Section 7.9)
- Changed wording in Wildlife Resources Standard 2156 for pack goat measures from “Enforce...” to “Require...” (WMP Section 7.9)
- Edited Recreation Resources Standard 2170: to add language “...with the exception of agency provided tie-ups where topography does not allow it outside the 200 feet.” (WMP Section 7.10)
- Added a new Guideline under Recreation Resources: Encourage use of temporary stock containment systems and tree-saver devices to minimize tree damage. (WMP Section 7.10) Carried changes into EA.
- Revised Recreation Resources – Commercial Services Objective 2187 to read: Maintain outfitter and guide priority use permit holder service days at existing actual use levels based on a review of actual use consistent with Forest Service and BLM handbook direction. Evaluate changes in amount of use, type of use, operating areas, or service day allocation using the most current guidance (i.e. needs assessment, capacity analysis), consistent with Forest Service and BLM handbook direction. Current direction is found at FSH 2709.14 53 and BLM H-2930-1, IIIA. (WMP Section 7.10.1)
- Clarified Recreation Resources – Commercial Services Objective 2188 to read: Develop temporary outfitter and guide use pools based on a review of actual use at the time of designation. Evaluate changes in the amount of use, type of use, or operating areas, using the most current guidance (i.e. needs assessment, capacity analysis, etc.), consistent with Forest Service and BLM handbook direction. Current direction is found at FSH 2790.14 53.11. BLM policy (BLM H-2930-1 1-9) allows for temporary uses including the use of pools, as appropriate (WMP Section 7.10.1)
- Deleted Recreation Resources – Commercial Services Standard regarding permanent structures. This direction is covered by policy, and by default in the standard specific to temporary structures.
- Clarified Recreation Resources – Commercial Services Standard 2189: Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g and BLM H-2930-1, BLM 6340 B.2(i)). (WMP Section 7.10.1)
- Revised Recreation Resources – Commercial Services Standard 2190: Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas. (WMP Section 7.10.1)
- Added Recreation Resources – Commercial Services Guideline 2193: The Authorized Officer may consider exceptions for group sizes over 12 people and/or 14 head of stock on case-by-case basis through permit and operating plan; however, these exceptions would be rare and would not exceed the group size limit of 20 people and 25 head of stock.

- Edited Heritage, Archaeological and Cultural Resources Goal 2198: from "...while allowing..." to "...while managing..." (WMP Section 7.12)
- Clarified Tribal Rights and Interests Standard 21105: Coordinate and consult with tribes to maintain their right to gather fish, wildlife, plants, and access traditional cultural and religious sites while maintaining wilderness character. (WMP Section 7.13)
- Revised Rangeland Resources Standard 21116: Routine livestock management activities in wilderness, including maintenance, would normally be accomplished by non-motorized, non-mechanized means. Requests by grazing permittees for occasional use of motorized or mechanized equipment or vehicles would be evaluated on a case by case basis through a MRA. (WMP Section 7.14)
- Revised Rangeland Resources Standard 21113: Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation. (WMP Section 7.14)
- Revised Mineral and Geologic Resources Objective 21119: Where valid existing rights occur, provide direction for managing mineral activities in wilderness in accordance with agency directives and regulations and with consideration of all applicable state and federal requirements. (WMP Section 7.15)
- Revised Mineral and Geologic Objective 21121: Ensure lands disturbed during mineral exploration and development activities are restored as nearly as practicable promptly upon completion or abandonment of operations. Plans of operations will stipulate reclamation and bonding requirements of the authorized operator. (WMP Section 7.15)
- Revised Mineral and Geologic Standard 21122: The plan of operation must outline all terms and conditions for reclamation and rehabilitation of an area upon completion of mineral exploration or development activity, including a timeline for removing all structures, equipment and support facilities for the operation and the area impacted by mineral operations must be restored as nearly as practicable to the contour and appearance of the landscape before operations commenced. (WMP Section 7.15)
- Revised portion of Research Standard 21154 regarding research proposals to encourage, but not require use of the Framework to Evaluate Proposals for Scientific Activities in Wilderness (Landres 2010, or most current). (WMP Section 7.19)
- Moved Search and Rescue standard regarding the flow chart in Appendix 1 to a guideline (21160).
- The ending portion of Search and Rescue Guideline 21162 was deleted to remove redundancy: "...for emergencies involving the life and safety of people in the wilderness." (WMP Section 7.20)
- Revised Zone 2 Standard 21169-Z2 to allow for existing class 3 trails. (WMP Section 7.21.2)
- Updated the public involvement section to include the comment period. (EA Section 1.4)
- Added Fort Bridger Treaty. (EA Section 2.8.2)

- Added paragraph about enforcing relevant laws, and posting information related to cultural resource protection. (EA Section 3.1.3)
- Deleted portion of quote from Keeping It Wild 2 that references “comfort facilities.” (EA Section 3.3.2)
- Revised Wildlife portion under Naturalness (Wilderness section) for Alt A, and Alt C to clarify statements about disease transmission. (EA Section 3.3.3)
- Glossary Edits: added several new definitions; revised and expanded several definitions; added citations for definitions taken from policy.
- Renumbered direction throughout Plan and EA.

DECISION

I have reviewed the analysis presented in the EA for the WMP, considered the comments received on the draft WMP, and discussed the project’s anticipated effects with both the Interdisciplinary Team, Field Office staff, and State Office staff. I have considered and incorporated the comments and input raised in staff to staff coordination meetings with Tribes, and comments from stakeholders and the public received on the draft WMP.

I have decided to select and implement **Alternative A (Proposed Action – the WMP)** for the management of the BLM portion of the CDAWC Wilderness. My decision includes direction for the preservation of wilderness character, while managing allowable uses of two Wilderness areas. Specifically, I am making the following decisions:

Direction	Alternative A—Proposed Action
Wilderness	
Standard	Use locally sourced native seed or plants where reseeding or replanting is determined necessary.
Standard	Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.
Standard	Assess impacts and determine if management actions are needed to maintain wilderness character (see “Wilderness Monitoring” section) if campsite and travel encounters increase by 10% or more over two reporting periods.
Standard	Assess impacts and determine if management actions are needed to maintain wilderness character if recreation site condition class increases by 5% or more over two reporting periods (see “Wilderness Monitoring” section).
Standard	Assess impacts and determine if management actions are needed to maintain wilderness character if total miles of user-developed routes (i.e., unauthorized trails) increase by 3% or more over two reporting periods (see “Wilderness Monitoring” section).
Standard	Ensure management activities are consistent with wilderness zone descriptions.
Guideline	Use natural openings for helicopter landing areas when needed for fire or emergency operations, to avoid impacts to wilderness character and minimize intrusions.
Wildlife Resources	
Standard	Require the following measures from the North American Packgoat Association to minimize contact between bighorn sheep and domestic goats used for packing: <ul style="list-style-type: none"> • All pack goats will be on leads or have leads attached to their collar or halter at all times. • All pack goats will be tethered at night within 30 feet of humans.

Direction	Alternative A—Proposed Action
	<ul style="list-style-type: none"> • If bighorn sheep are observed within 100 yards of a potential camping area, pack goat users will take all reasonable measures to move their campsite to a different area. Hazing techniques may be used to deter bighorn sheep from moving closer to campsites if necessary. • Pack goat numbers will be limited to a maximum of three (3) pack goats per person, and a maximum of nine (9) pack goats per group. • When bighorn sheep are using trails for travel pack goat users will move off the trail 100 yards. If that distance is not attainable, the pack goat user will travel back along the trail away from the bighorn sheep and exit the trail when the 100 yard distance can be reached. Pack goat users will stay off the trail until bighorn sheep have passed. If visibility is limited to less than 100 yards up trail, a pack goat user will go to the trail and observe for bighorn sheep before continuing with pack goats. • When accessing browsing areas and water, a pack goat user will check for the presence of bighorn sheep before allowing access for pack goats. Whenever possible, water access will be limited to areas of unlikely bighorn sheep use. • In event that direct contact of a pack goat and a bighorn sheep is observed, the location and as much of a description as is possible of the sheep and incident will be written, photographed if possible and reported to the appropriate agency as soon as reasonably possible. • If any pack goat becomes lost, missing or separated from the owner and herd every effort will be exhausted to locate and recover the lost pack goat. If the owner is unable to locate and recover the lost pack goat, contact the Sawtooth NRA by telephone immediately. A full disclosure of all available information will be provided including: the last known location (GPS coordinates, legal description, geographic location, name or number of trail or trailhead), the circumstances that resulted in it becoming lost, a description of the pack goat, and any equipment that it was carrying.
Standard	Continue to work cooperatively with IDFG to reduce the risk of disease transmission or other stressors between bighorn sheep and domestic animals.
Recreation Resources	
Standard	Limit group size to a maximum of 12 people. (See exception for Native American tribes in the Tribal Rights and Interests section.)
Standard	Limit the combined number of recreational stock in one group to 14 head of stock.
Standard	Prohibit shortcutting trail switchbacks on foot or with recreational stock.
Standard	Only allow campfires below 8,800 feet elevation and within 200 yards of Walker Lake, Island Lake, Upper and Lower Chamberlain Lakes (9,477 and 9,197 feet), and Boorn Lakes.
Standard	Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-ups where topography does not allow tethering outside the 200 feet.
Standard	Limit tying of recreational stock to live trees to a maximum of one hour.
Standard	Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs.
Standard	Require human waste to be buried and covered, at least 200 feet from water, campsites, and trails; or packed out.
Standard	Manage winter recreation to minimize conflict with high elevation wildlife species including mountain goats and wolverine.
Guideline	Prevent human/wildlife encounters by emphasizing proper camping techniques and food storage and containment.

Direction	Alternative A—Proposed Action
Guideline	Discourage off-trail route marking and remove user-created route markers (e.g., stacked rocks, flagging).
Guideline	Encourage use of no trace fires (i.e. use of fire pans or fire blankets).
Guideline	Maintain the voluntary registration system.
Recreation—Commercial Services	
Standard	Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g and BLM H-2930-1, BLM 6340 B.2(i)).
Standard	Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas.
Standard	Ensure operating plans for priority use and temporary use outfitting and guiding permits direct outfitters to model appropriate wilderness practices and incorporate awareness of wilderness values in their interaction with clients and others.
Guideline	The Authorized Officer may consider exceptions for group sizes over 12 people and/or 14 head of stock on case-by-case basis through permit and operating plan; however, these exceptions would be rare and would not exceed the group size limit of 20 people and 25 head of stock.
Scenic Environment	
Guideline	Build facilities and structures, when needed for resource protection, out of natural materials that blend into the natural environment.
Guideline	Do not consider visual conditions changed by natural events and processes as detrimental to scenic qualities.
Heritage, Archaeological and Cultural Resources	
Guideline	Develop a management strategy that includes, but is not limited to education/interpretation or signage outside of wilderness, or natural barriers to prevent additional damage if monitoring reveals that damage is occurring to cultural, archaeological, or historic resources. The wilderness specialist and archaeologist, in consultation with sovereign tribal governments and the State Historic Preservation Officer, will work together to develop the management strategy.
Rangeland Resources	
Standard	Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation.
Fire Management	
Guideline	Determine actions for each wildland fire that are consistent with protecting wilderness character while providing for firefighter and public safety, and considering impacts to private property and developed facilities in surrounding areas.
Guideline	Avoid locating temporary wildfire management support facilities (e.g., spike camps, landing areas) in wilderness. When considered necessary, all efforts will be made to use areas with pre-existing impacts, outside of Zone 1. Responder safety will be the first consideration when making this determination.
Guideline	Minimize suppression impacts to wilderness character by using MIST and assigning Resource Advisor(s) with knowledge, training, and/or experience in wilderness management. Return disturbance caused by suppression actions to as natural a condition as possible.

Direction	Alternative A—Proposed Action	
Lands and Special Uses		
Standard	Consider the direction for each zone when evaluating a proposal; zone direction may influence where and how approval is granted.	
Wilderness Education and Interpretation		
Standard	Interpretive information may be included on trailhead information signs or communicated elsewhere outside of wilderness, but will not be located on signs in wilderness.	
Guideline	Emphasize a proactive approach to wilderness education. Build partnerships and relationships with organization camps, group organizations, businesses, school and university programs, permittees, permanent and seasonal staff, and other users to integrate Leave No Trace and wilderness ethics into their operations.	
Guideline	Communicate rules and regulations primarily outside of wilderness.	
Search and Rescue		
Guideline	Use the flow chart in Appendix 1 [of the WMP] for approval of motorized and mechanized emergency response.	
Guideline	Use natural terrain features for helicopter landing areas. Care should be taken that vehicles used in SAR operations do not transport invasive species or cause unacceptable resource or social impacts. Immediately address any resource damage resulting from SAR operations.	
Management Zones		
Management Zones are established:	Cecil D. Andrus-White Clouds Wilderness: 96% Zone 1 3% Zone 2 0.5% Zone 3 0.6% Zone 4	Hemingway-Boulders Wilderness: 99% Zone 1 <1% Zone 2 <1% Zone 3 <1% Zone 4
Standard – Zone 1	Non-historic facilities, installations, or developments are not present in this zone unless authorized through a valid existing right or grazing permit or are the minimum necessary for administering as wilderness. No NFS trails are present in this zone.	
Standard – Zone 1	No signs are present except in extremely rare instances for resource protection in this zone. No permanent signs are allowed.	
Standard – Zone 2	The highest trail standard in this zone is Class 2, with the exception of the existing Class 3 trails in the Hemingway-Boulders Wilderness: the Upper North Fork #128 and the western end of the West Fork-North Fork #129.	
Standard – Zone 2	Non-historic facilities, installations, or developments are not present in this zone unless authorized through a valid existing right or grazing permit or are the minimum necessary for administering the area as wilderness.	
Standard – Zone 2	No signs are present except in extremely rare instances as required for resource protection in this zone. No permanent signs are allowed.	
Standard – Zone 3	The highest trail standard in this zone is Class 3.	
Standard – Zone 3	Signs may be present at trail junctions and, in rare cases, may be found elsewhere for resource protection.	
Standard – Zone 4	The highest trail standard in this zone is Class 3.	
Standard – Zone 4	Signs may be present at trail junctions and may be infrequently used elsewhere for resource protection.	

RATIONALE FOR THE DECISION

I have evaluated the three alternatives (Alternative A, B and C) analyzed in the EA. I have selected **Alternative A (Proposed Action – the WMP)** because it provides the greatest attainment of the project's purpose and need – preserving wilderness character - while still being sensitive to allowable uses and resource concerns within the CDAWC Wilderness. The WMP will guide management so that the preservation objectives of the Wilderness Act can be met.

The proposed action has been analyzed and determined that there is no significant impact as referenced in the attached Finding of No Significant Impact (FONSI). In making this decision, I evaluated the purpose and need for the WMP, the effects disclosed in the EA, and comments received during scoping, and the 30-day notice and comment period. The following discussion summarizes the rationale for my decision.

My decision to implement the direction described under the Wilderness section for monitoring will ensure these indicators are tracked over time. I believe these three indicators will capture changes to the environment (recreation site condition class, and user-developed routes) and changes to opportunities for solitude and the social setting (campsite and travel encounter), thus allowing the agency to consider appropriate response depending on the causal factors.

My decision to implement the proposed action for management of wildlife resources aims to preserve the natural quality of the CDAWC Wilderness. Requiring pack goat management measures is the appropriate method for minimizing the risk of pathogen transmission from pack goat to bighorn sheep in the context of the Wilderness.

While having agency personnel present to enforce the best management practices for pack goat use will be challenging, these practices were established by the North American Packgoat Association, and pack goat users may already be familiar with them. This approach will allow for pack goat users to continue to enjoy the majority of the Wilderness, while reducing the risk of pathogen transmission to bighorn sheep.

Commenters provided input on both sides of the pack goat management topic: some comments promoted banning pack goat use in both wilderness areas; whereas other comments included rationale for allowing pack goat use with a variety of management techniques. I considered the rationale for both arguments, and the various suggestions for managing use proposed. The measures promoted by the North American Packgoat Association will help maintain spatial separation between bighorn sheep and pack goat users. No vaccination for pack goats is currently available, and research is on-going.

A thorough research review regarding pathogen transmission to bighorn sheep was completed for the EA. The research by Dr. Highland and additional information regarding the presence of *M. ovipneumoniae* in animals other than pack goats and domestic sheep have been considered, but this does not change the conclusions found in the wildlife specialist report, or the EA.

My decision includes management of recreational uses within the CDAWC Wilderness to protect natural resources and the untrammeled quality, while preserving opportunities for solitude, and primitive and unconfined recreational opportunities. Establishing limits on group sizes for both people (12 people maximum per group) and recreational stock (14 head maximum per group), prohibiting campfires above 8,800 feet (with certain exceptions), establishing requirements for recreational stock handling, and managing winter recreation will preserve wilderness character, ecological function, and wildlife and vegetation resources while minimizing the impact to recreational opportunities. The voluntary registration system will continue to provide valuable user data to guide decision making.

We received several comments regarding commercial outfitting and guiding services. Outfitting and guiding is specifically addressed in the Wilderness Act and reiterated in the enabling legislation as a legitimate commercial use in wilderness. The agencies also recognize the value of outfitting and guiding to the recreating public. My decision includes direction specific to outfitting and guiding that aligns with the act, agency policies, and retains and perpetuates wilderness character as it pertains to all users and the

resource. In response to comments, some modifications were made to terminology throughout the document to better clarify the role of outfitters and guides in maintaining wilderness character. These modifications do not change the intent of the proposed alternative or my decision.

Several commenters disagreed with the term enhance, such as in Goal 2103 "Protect and enhance wilderness character." As noted above, under the purpose and need, the Wilderness Act (Section 4) requires that "... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area." As described in agency policy (BLM Manual 6340), including the diagram relating wilderness character to human influence, the agency mandate is to preserve or improve wilderness character. The direction in this goal must also comply with the Wilderness Act, and meet direction for the minimum necessary for the administration of the area as wilderness (Guidelines 2122 and 2123). The broad, higher lever direction (Goal 2103, 2109, Objective 2195, and a Zone 2 Desired Condition) was revised to use the terms "protect" and "preserve" rather than enhance. Management activities, such as reclamation, may be implemented to improve wilderness character over time.

My decision includes the establishment of management zones across the CDAWC Wilderness. Zones were developed based on conditions prevailing at the time of designation, including visitor use levels and patterns, and desired conditions to prevent degradation to wilderness character, and ecological functioning. This strategy acknowledges the variation across the landscape: Zone 1 is the most primitive with the least visitation, and Zone 4 includes the most heavily used areas with existing impacts. Plan direction aims to preserve the wilderness values and resources present within each zone. Management zone direction will guide future activities, in accordance with this decision, to avoid unacceptable degradation of wilderness resources. Additionally, this decision includes direction related to commercial services, fire management, and lands and special uses within management zones.

My decision regarding educational efforts in wilderness aims to facilitate recreational activities, and preserve overall wilderness character. Education allows the agency to be proactive and adaptive when managing visitor use in order to protect both the physical and social settings. Following this decision, the BLM will work with wilderness rangers, volunteers and partner organizations, as well as agency law enforcement to implement the direction established herein. This decision does not apply mandatory permits. The BLM will focus on other means of education to meet the purposes of educating on regulations, Leave No Trace, and other messages.

Additional direction described in the WMP is related to established policy or law, and is not analyzed in the EA, nor does it require a decision to implement, or was previously analyzed previously in the Challis Resource Management Plan.

Commercial livestock grazing occurred at the time of designation, and this WMP does not change or affect these operations.

Each of the alternatives considered in the EA has benefits and shortcomings relative to the purpose and need, issues, and/or public concern. The purpose and need was developed based on the Wilderness Act, and through direction in the RMP and other national and regional laws and policies. Among the alternatives evaluated, I believe Alternative A best meets the project purpose and need, and contains the direction to preserve wilderness character. Alternative A will be the most effective of the alternatives in managing recreational and other allowable uses, while applying moderate visitor restrictions to reduce environmental impacts.

Additional Clarity in the EA

The wilderness cumulative effects section (Alternative A) will be amended for extra clarity, but this addition will not change the conclusions of the EA or this DR/FONSI: "Summary of Cumulative Effects: The effects analysis above details the relatively minor direct and indirect effects of this alternative. Many of the proposed actions are designed to better protect wilderness character, including group size limits,

campfire restrictions, and recreational stock management. These actions would be a cumulative, minor to moderate adverse effect to opportunities for primitive and unconfined recreation, while preserving the untrammelled, undeveloped, natural, and opportunities for solitude qualities. None of the impacts were found to be significant.”

PUBLIC AND OTHER INVOLVEMENT

Public Involvement

Public involvement has been extensive throughout the planning and analysis process leading to this document. The agencies provided a monthly newsletter, beginning in October 2016, via email to stakeholders to provide regular planning updates.

The scoping period for the draft WMP occurred November 21, 2016 through January 31, 2017 (71 days). In December, open house meetings were offered to the public in Challis, Stanley, and Ketchum, Idaho. Several news outlets included the scoping period information, including News 8 and the Idaho Mountain News. The agencies also posted information on their respective webpages and social media sites. During this scoping period, 70 letters were received.

The 30-day opportunity to comment on the proposed plan (per 36 CFR 218 Subparts A and B) occurred October 27-November 27, 2017 and included public meetings in Mackay, Challis, Stanley, and Ketchum (November 1, 13 and 14, 2017). A legal notice was issued in the *Times News*, the paper of record on October 27, 2017. During this time, 33 parties submitted written comments.

Government and Agency Consultation

Scoping letters were sent to the U.S. Fish and Wildlife Service and NOAA Fisheries representatives via email on November 29, 2016, soliciting input on the draft WMP. Biological assessments (BA) consistent with requirements of Section 7 of the Endangered Species Act were prepared. See #9 in the FONSI below for more information on determinations.

The Forest Service and BLM met with Idaho Department of Fish and Game during the scoping period on December 7, 2016.

Coordination with Custer County Commissioners and the Custer County Natural Resource Advisory Committee occurred throughout the planning process. Representatives from each federal agency attended the monthly Custer County Commissioners meeting, with discussions regarding the planning process initiating shortly after the designation of the wildernesses. The Forest Service and BLM provided the Commissioners with a briefing on the WMP on November 18, 2016, prior to the scoping period. Additional coordination between the federal agencies and the Custer County Commissioners, occurred August 8, 2017 to discuss the wilderness plan process, October 17, 2017 prior to the start of the comment period, and April 27, 2018, prior to the initiation of the objection period.

The Forest Service and BLM also provided Blaine County Commissioners with updates regarding the planning process. During the scoping period, Forest Service and BLM staff provided a briefing to the Commissioners on January 3, 2017. Prior to the comment period, the agencies met with the Commissioners on October 10, 2017.

Government to Government Tribal Consultation

Tribal governments have a unique legal and political relationship with the United States government as reflected in the United States Constitution, treaties, statutes, court decisions, executive orders, and memoranda. The Nez Perce Tribe, Shoshone-Bannock Tribes and Shoshone-Paiute Tribes are sovereign nations who work with the Federal government and its agencies through the process of government-to-government consultation. Many of the treaties and executive orders signed by the United States government in the mid-1800s reserved homeland for the tribes. Additionally, the treaties with the Nez

Perce and Shoshone-Bannock Tribes reserved certain rights outside of established reservations, including fishing, hunting, gathering, and grazing rights.

The Forest Service attended Wings and Roots meetings with the Shoshone-Paiute Tribes during the development of the WMP and EA. The WMP was introduced to the Tribes in November 2016 at the Wings and Root Meeting, and the Tribes were provided an overview of the proposed WMP in February 2017, with a follow-up in April 2017. Additional discussion of the project occurred at Wings and Roots Meetings in October and November 2017. At the December 2017 meeting, the Tribes had no further comments for the project.

The Forest Service met with the Shoshone-Bannock Tribes in staff-to-staff meetings in January and November 2017 and at regular technical meetings for updates. The Nez Perce Tribe and the Shoshone-Bannock Tribes were sent letters November 21, 2016 and October 26, 2017, concurrent with the start of the scoping and comment periods. The BLM met with the Shoshone-Bannock Tribes on April 20, 2017 and October 24, 2017.

The proposed action will have no adverse effect on the physical integrity of cultural and sacred sites. Ceremonial use of cultural and sacred sites is not affected by the proposed action. My decision approves standards and guidelines developed for other resources which also protect tribal resources. Requests for motorized or mechanized access to cultural and sacred sites will be evaluated through the MRA process.

OTHER ALTERNATIVES CONSIDERED

In addition to the selected Alternative A, two alternatives were developed and analyzed in detail in the EA: Alternative B (Natural-Focus Alternative), and Alternative C (Minimum Management). The discussion below summarizes my rationale for not selecting either of these alternatives.

Alternative B (Natural-Focus Alternative) – Alternative B emphasizes protection of wilderness character with a management approach aimed at protecting wildlife, and opportunities for solitude and primitive recreation by applying additional restrictions on visitor use. This alternative prohibits pack goat use, restricts campfire use to Zones 3 and 4, and when compared with Alternative A, proposes smaller group size limits for people and recreational stock in Zone 1. This alternative also considers mandatory permits for all users, and in office permits for large groups (8 or more), or groups with recreational stock that remain overnight.

While Alternative B includes additional direction for the protection of wilderness character and wildlife, it would be at the expense of additional regulation on recreational uses. I considered public input both in support and opposition of this alternative. Comments generally addressed the complete ban on pack goat use, smaller group size limits, or the limited area allowed for campfire use. Commenter concerns about disease transmission to bighorn sheep contend that the only way to prevent disease transmission is to keep pack goats out of bighorn sheep habitat. While elimination of pack goat use entirely from the two wilderness would provide the lowest risk among the alternatives, I prefer to manage the existing use rather than entirely prohibit it. I believe the selected alternative best balances reduced risk of disease transmission while managing for on-going recreational use.

This Alternative would have applied more stringent group sized restrictions in Zone 1 (8 persons and 10 head of stock), and (similar to the selected alternative) a maximum of 12 persons or 14 head of stock in Zones 2, 3, and 4. Comments in support of this alternative typically pointed to the impacts of large stock groups and recommend the smaller size to better protect vegetation and soils where stock travel or are tied up. Most visitors travel and camp in groups less than 12 in these areas, so this additional restriction would not pose substantial additional protections over the selected alternative. Further, we considered the complexity of group size limits in the region that recreationist would have to adhere to (e.g. unlimited group sizes nearby, 20 people and 25 head of stock outside the wilderness). This additional restriction within certain parts of the wilderness areas was determined to be overly restrictive.

Comments in support of the campfire restrictions described under Alternative B pointed to benefits, such as increased retention of dead and down wood, protection of whitebark pine, protection of wildlife habitat (e.g. wolverine). The campfire proposal under this alternative would restrict campfire use to 1% of the two wilderness areas, whereas the selected alternative (Alternative A) would continue to allow visitors to the more remote areas of the wildernesses to have campfires (e.g. warming fires for hunters).

This alternative was not selected as it does not best meet the purpose and need of the project. Through the analysis presented in the EA, the level of restrictions posed in Alternative B are not necessary to maintain wilderness character.

Alternative C (Minimum Management) – Under Alternative C, the Wilderness would be managed solely according to legislative and regulatory requirements, including the Wilderness Act, agency-specific policy (BLM Manual 6340, FS Manual 2320, among others), BLM Challis Field Office Resource Management Plan (1999), and the FS Sawtooth Forest Plan (2012), without a more proactive management approach to address uses and protect wilderness character.

These areas have been managed as recommended wilderness, which included a number of restrictions (group size, campfire use) that have been in place prior to the designation of wilderness. Under this alternative these restrictions would remain in place, unaltered. The current regulations are not sufficient to adequately meet the needs laid out in the purpose and need above.

This alternative does not include management of pack goats, which would not adequately address the risk of disease transmission to bighorn sheep. This alternative would result in the highest risk of contact among the alternatives. Similarly, this alternative would not include management of recreational stock, which would not protect sensitive riparian and alpine vegetation, including whitebark pine.

Current restrictions on group size (no limit on the BLM portion, and 20 people and 25 head of stock on the FS portions) are too large for existing campsites and these large sizes can be ineffective at reducing resource impacts and protecting natural conditions. Impacts to wildlife and wildlife habitat, including high elevation whitebark pine would remain constant or may increase with the large group size under this alternative. While this alternative would continue existing campfire restrictions, it would not address campfire impacts to occurring in other locations in the wilderness areas.

Alternatives Considered, but Not Analyzed – In addition to the above alternatives, one other alternative was considered, but not analyzed, and that was the No Action Alternative. A true No Action Alternative would not comply with law or policy, because the BLM is required to manage designated wilderness according to standards that were not in effect prior to the designation. Further, the enabling legislation requires the agencies develop “wilderness management plans for the wilderness areas.”

Appeal Opportunities

This decision may be appealed to the Interior Board of Land Appeals, Office of Hearings and Appeals in accordance with 43 CFR Part 4. If an appeal is taken, your notice of appeal must be filed in the Idaho Falls District Office, 1405 Hollipark Drive, Idaho Falls, Idaho 83401, within 30 days of the signing of the decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition for stay pursuant to 43 CFR 4.21, the petition for stay must accompany your notice of appeal. Copies of the notice of appeal and petition for stay (if any) must also be served on each party named in this decision and to the Interior Board of Land Appeal and the Office of the Solicitor, Field Solicitor – U. S. Department of the Interior, University Plaza, 960 Broadway Avenue, Suite 400, Boise, Idaho, 83706, at the same time the original document are filed with the Idaho Falls District Office. If a petition for stay is filed, it shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied.
- (2) The likelihood of the appellant’s success on the merits.

- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

Approved by: Mary D'Aversa
Mary D'Aversa
District Manager
Idaho Falls District

8/21/2018
Date

Finding of No Significant Impact
for the
Hemingway-Boulders and Cecil D. Andrus-White Clouds
Wilderness Management Plan
Bureau of Land Management
Challis Field Office

Environmental Assessment: DOI-BLM-ID-I030-2016-0003-EA

Finding of No Significant Impact:

I have reviewed the Council on Environmental Quality Regulations for significance (40 CFR 1508.27) and have determined that this decision is not a major federal action that would significantly affect the quality of the human environment, either individually or cumulatively. Preparation of an environmental impact statement pursuant to Section 102 (2)(c) of the National Environmental Policy Act of 1969 is not required. This determination is based on the following factors as outlined in 40 CFR 1508.27.

Context:

The CDAWC Wilderness is part of the National Wilderness Preservation System. These areas are of most interest to the neighboring residents of Idaho, Oregon, and Nevada. Activities associated with my decision will be confined to the BLM portion of the CDAWC Wilderness. As defined in the purpose and need and the proposed action, my decision is restricted to BLM-administered lands within the Wilderness. There is no private land within the two wilderness areas.

Intensity:

The following 10 statements serve as a checklist that describe how the project's proposed action or associated Environmental Analysis relates to the criteria for significance defined by CEQ. Intensity has been addressed by describing how project activities relate to each criteria and what was considered during our analysis that was significant.

1. Impacts that may be both beneficial and/or adverse.

The environmental assessment has considered both beneficial and adverse impacts of the wilderness management plan. Overall, the plan will result in protection of wilderness character, which includes untrammeled, naturalness, undeveloped, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and other features of value. Preserving the natural ecosystem and opportunities for recreation would improve the quality of the human environment.

The analysis documented in Chapter 3 of the EA did not identify any individually or cumulatively significant impacts resulting from implementation of the WMP (EA Chapter 3). The project record contains additional technical reports. In considering the wilderness resource as a whole, I have determined that the effects to wilderness character will not be significant.

2. The degree to which the proposed action affects public health or safety.

The proposed WMP would not result in significant effects on public health and safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The planning area encompasses designated wilderness. Congress designated the Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulders Wilderness to ensure protection of wilderness character. The Wilderness Act (Section 2a) states that wilderness areas "shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and

enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character.” The EA describes affects to the wilderness resource, and concludes that the WMP would not result in significant effects (EA Chapter 3).

As stated in the EA, there will be no adverse effects to historic or cultural resources (EA, Section 2.8.3). No designated wild and scenic rivers, park lands, or prime farmlands, were identified in the project area. Wetlands have been identified in the wilderness areas, but no effects are anticipated from the selection of Alternative A. Similarly, the wilderness areas include alpine ecosystems with sensitive vegetation and wildlife. These ecologically critical areas are present, and the decision would protect these areas.

4. The degree to which the effects on the quality or the human environment are likely to be highly controversial.

Controversy in this context refers to situations where there is substantial dispute as to the size, nature, or effect of the federal action, rather than opposition to its implementation. The scientific basis for the analysis is contained in the project record and summarized in the EA. Standard analysis techniques and models were used. Literature supporting the use of these models and qualitative discussions, as used in this analysis, is contained in the project’s planning record (EA Chapter 3).

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The environmental analysis, including the EA, resource technical reports, and biological evaluations (contained in the planning record), determined that the selected alternative will not involve any highly uncertain or unknown risks (EA, Chapter 3). The management activities associated with my decision are typical of those successfully implemented in the past for other designated wilderness areas.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

My decision is consistent with direction found in the Forest Plan. Implementing my decision will not establish a precedent for future actions with significant effects nor does it represent a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Chapter 3 of the EA discloses that the Alternative A will not result in any known significant temporary, short term, long term, or cumulative effects.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed, or eligible for listing, in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

My decision will not result in the loss or destruction of important or significant scientific, cultural, or historic resources (EA, Chapter 3).

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The EA discloses the effects of my decision to threatened or endangered species (EA, Section 2.8.1). This required disclosure involves wildlife and fish species listed under the Endangered Species Act of 1973, as amended. Alternative A would have a *may affect, not likely to adversely affect* determination for listed wildlife species (Canada lynx); a *will not jeopardize* the continued existence for wildlife species proposed

for listing (wolverine); and *no effect* to steelhead, bull trout, and Chinook salmon or their designated critical habitat. Designated critical habitat for Canada lynx is not in the project area. My decision will not adversely affect any endangered or threatened species or their habitats.

10. Whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment.

Consistency with laws or requirements imposed for protection of the environment is discussed above under "Consistency with Forest Plan and with Laws and Regulations," and Section 2.8 of the EA (Compliance with Laws, Regulations, Executive Orders, and State Statutes). The project's planning record provides supporting information.

Approved by: Mary D'Aversa
Mary D'Aversa
District Manager
Idaho Falls District

8/21/2018
Date

**Decision Notice and Finding of No Significant Impact
for the
Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness
Management Plan
Sawtooth National Forest
Blaine and Custer County, Idaho**

INTRODUCTION

The Environmental Assessment (EA) discloses the environmental impacts of a wilderness management plan for the Hemingway-Boulders (HB) Wilderness and Cecil D. Andrus-White Clouds (CDAWC) Wilderness. These Wilderness areas were designated through the passage of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act (P.L. 114-46).

This decision notice will implement the Wilderness Management Plan (WMP) for the two Wilderness areas. The WMP will provide the primary management approach for the HB Wilderness and the CDAWC Wilderness to preserve wilderness character as identified by the Wilderness Act of 1964.

This decision also amends the Sawtooth National Forest Land and Resource Management Plan, as amended (Forest Plan; USDA Forest Service 2012) to include a new management area (Management Area [MA] 21), which encompasses the entirety of the two wildernesses managed by the Forest Service, and to modify the portions of MA 3 and MA 4 to exclude the lands now designated as wilderness.

The EA has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA, 40 CFR 1500-1508), the National Forest Management Act and its implementing regulations. The plan amendment has been prepared pursuant to 36 CFR 219 (2012 Planning Rule). Public involvement opportunities occurred throughout the planning process.

PURPOSE AND NEED

The purpose of this project is to preserve wilderness character as identified by the Wilderness Act within the two wilderness areas, situated on federal public land managed by the Forest Service. Per the Wilderness Act of 1964 (Section 4), "... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area." Although wilderness character is a complex idea and is not explicitly defined in the Wilderness Act, the qualities of wilderness character are commonly described as:

- Untrammeled—Area is unhindered and free from intentional actions of modern human control or manipulation.
- Natural—Area appears to have been primarily affected by the forces of nature and are substantially free from the effects of modern civilization.
- Undeveloped—Area is essentially without permanent improvements or the sights and sounds of modern human occupation, and it retains its primeval character.
- Outstanding opportunities for solitude or a primitive and unconfined type of recreation—Area provides outstanding opportunities for people to experience solitude or primeval and unrestricted recreation including the values associated with physical and mental inspiration, challenge, self-reliance, self-discovery, and freedom.
- Other Features of Value—Area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. Though not required of any wilderness, these characteristics, if present, must be protected as rigorously as any of the other four required qualities.

The need for action is defined as the gap between the existing and desired conditions. The desired condition for the wilderness areas is:

People visiting wilderness within the National Forest can find outstanding opportunities for primitive and unconfined recreation, including exploration, solitude, risk, and challenge. The area is primarily affected by the forces of nature, with man's imprint substantially unnoticeable.

The need for the project is to identify the conditions and opportunities for which the Wilderness areas would be managed and to create specific direction for managing resources and activities that would bring existing conditions closer to meeting desired conditions. The need for the action is to address preservation and protection of wilderness character, and specifically:

- Preserve the untrammelled quality by minimizing actions that intentionally manipulate the earth and its community of life;
- Protect wildlife:
 - reduce risk of disease transmission to bighorn sheep;
 - minimize recreation conflict with wildlife species;
 - preserve important habitat for a wide array of fish and wildlife species;
- Manage recreation:
 - minimize impacts of large groups on wildlife, vegetation, and opportunities for solitude;
 - educate visitors on a variety of topics to minimize user impacts;
- Protect vegetation:
 - protect sensitive riparian and alpine vegetation, including whitebark pine, by managing campfire use and recreational stock use;
- Preserve the undeveloped nature of the wilderness by managing developments and human intrusions;
- Preserve opportunities solitude or primitive and unconfined recreation.

Additionally, the signing of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act (Public Law 114-46) changed the management direction of these areas. This Act states "IN GENERAL - Subject to valid existing rights, each wilderness area shall be administered by the Secretary in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.)..." For the Forest Service portions of the two wilderness areas, the change was from recommended wilderness to designated wilderness. P.L. 114-46 requires: "Not later than 3 years after the date of enactment of this Act, the Secretary of Agriculture and the Secretary of Interior shall collaboratively develop wilderness management plans for the wilderness areas."

The forest plan amendment would create a new MA (21) to incorporate management approaches, and modify the portions of MA 3 and MA 4 to exclude the lands now designated as wilderness.

CHANGES BETWEEN THE DRAFT WMP, EA, AND THIS NOTICE

A number of changes were made to the EA following distribution of the draft WMP. These changes are reflected throughout the EA and are summarized below. The changes reflect consideration of public comments on the proposed plan and EA and its effects upon wilderness character, and ensured that the analysis included the best scientific information. I do not believe that the edits and corrections necessitate issuance of another WMP or other form of document for comment. The updated information disclosed in the EA falls within the scope of the analysis depicted in the draft WMP and in most cases simply provides additional clarity. Direction numbers in this list reference the April 2018 version of the WMP. In addition to minor edits and corrections, the following changes were made:

- The name of the White Clouds Wilderness was updated to: Cecil D. Andrus-White Clouds Wilderness as directed in Consolidated Appropriations Act, 2018 (Public Law 115-141).
- Added language to the plan: The direction in the plan would apply within the final surveyed boundaries. (WMP Section 5)
- Added language: Per wilderness law and policy, access associated with hunting, fishing, and trapping is limited to non-motorized and non-mechanized means and is allowable as long as the trapper does not sell the fur, hides, or other parts of the trapped animal. (WMP Section 5) Deleted Standard specific to hunting, trapping from the Recreation section.
- Revised Special Uses language for extent necessary from “restriction” to “recognition.” (WMP Section 5)
- Replaced “A strong local population of bull trout exists within the upper Warm Springs Creek watershed.” with “Migratory and resident bull trout use Warm Springs Creek, the East Fork Salmon River, and their tributaries for spawning and rearing.” (WMP Section 6.5)
- Inserted “factors including, but not limited to” into the causal factors for negative impacts. (Section 6.6)
- Revised the MA Description for Wildlife Resources to reference species management plans in a general manner. (Section 6.9)
- Added into the MA Description for Recreation Resources: The agencies acknowledge the Memorandum of Understanding (MOU) between Regions 1, 4, and 6 of the Forest Service, the Idaho State BLM office and the Idaho Outfitters and Guides Licensing Board (IOGLB). Agencies will work with the Licensing Board to manage commercial services within the Wilderness, such as when undertaking the needs assessment through the land use plans. (Section 6.10) Also, added IOGLB to Acronyms. Added MOU with IOGLB to references.
- Revised paragraph in MA Description for Recreation Resources to read: Six outfitters hold priority use permits for operations in the Cecil D. Andrus-White Clouds Wilderness, five are administered by the Sawtooth NRA, and one by the Challis Field Office. They offer guided hiking, mountain climbing, skiing, horse packing, hunting, and fishing opportunities. Of these, three also operate in the Hemingway-Boulders Wilderness. Two assigned outfitter campsites are located in the White Clouds Wilderness and one is in the Hemingway-Boulders Wilderness. These sites have some development, including tent and stock structures. Temporary use outfitting and guiding occurs in these areas as well. The type and amount of temporary outfitter and guide use varies from year to year. (WMP Section 6.10)
- Added to Wilderness Goal 2109: National Historic Preservation Act protocols will be followed. (WMP Section 7.1)
- Revised wording of Wilderness Goals 2103, 2109, Scenic Environment Objective 2195, and a Zone 2 Desired Condition to use the terms preserve or protect, in lieu of enhance. (WMP Sections 7.1., 7.11, and 7.21.1)

- Reword of Wilderness Guideline 2124: Allow natural processes to dominate and maintain ecosystem functions, including natural restoration. Where human activities have substantially degraded the wilderness condition, active management may be considered to restore wilderness character. In addition to an MRA, the Framework for Evaluating Ecological Intervention (or most current) is a valuable method that may be used for evaluating necessary and appropriate action. (WMP Section 7.1) Added “Framework for Evaluating Ecological Intervention in Wilderness” into references.
- Revised Wildlife Resources Objective 2152: When federal and State agencies agree removing fish is necessary for protecting and improving wilderness character, removal may occur, contingent upon an Minimum Requirement Analysis (MRA) and NEPA analysis, as required. (WMP Section 7.9)
- Changed name of East Fork Herd Home Range to Pack Goat Exclusion Area for accuracy in Wildlife Resources Standard 2155. (WMP Section 7.9)
- Changed wording in Wildlife Resources Standard 2156 for pack goat measures from “Enforce...” to “Require...” (WMP Section 7.9)
- Edited Recreation Resources Standard 2170: to add language “...with the exception of agency provided tie-ups where topography does not allow it outside the 200 feet.” (WMP Section 7.10)
- For Trail 674, the mileage stated incorrectly referenced the full length of the trail from Slate Creek road to Warm Springs Trail (671). The corrected mileage from O’Caulkins Lake to Warm Springs was revised to 3.9 miles in the Recreation Resources Standard 2178. (WMP Section 7.10) Also, as part of this correction Zone 2 was established around the portion of the trail ‘below’ or to the east of O’Caulkins Lake. This revision is reflected in Figure 9 map in the WMP, and in the online [storymap](#).
- Added a new Guideline under Recreation Resources: Encourage use of temporary stock containment systems and tree-saver devices to minimize tree damage. (WMP Section 7.10) Carried changes into EA.
- Revised Recreation Resources – Commercial Services Objective 2187 to read: Maintain outfitter and guide priority use permit holder service days at existing actual use levels based on a review of actual use consistent with Forest Service and BLM handbook direction. Evaluate changes in amount of use, type of use, operating areas, or service day allocation using the most current guidance (i.e. needs assessment, capacity analysis), consistent with Forest Service and BLM handbook direction. Current direction is found at FSH 2709.14 53 and BLM H-2930-1, IIIA. (WMP Section 7.10.1)
- Clarified Recreation Resources – Commercial Services Objective 2188 to read: Develop temporary outfitter and guide use pools based on a review of actual use at the time of designation. Evaluate changes in the amount of use, type of use, or operating areas, using the most current guidance (i.e. needs assessment, capacity analysis, etc.), consistent with Forest Service and BLM handbook direction. Current direction is found at FSH 2790.14 53.11. BLM policy (BLM H-2930-1 1-9) allows for temporary uses including the use of pools, as appropriate (WMP Section 7.10.1)

- Deleted Recreation Resources – Commercial Services Standard regarding permanent structures. This direction is covered by policy, and by default in the standard specific to temporary structures.
- Clarified Recreation Resources – Commercial Services Standard 2189: Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g and BLM H-2930-1, BLM 6340 B.2(i)). (WMP Section 7.10.1)
- Revised Recreation Resources – Commercial Services Standard 2190: Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas. (WMP Section 7.10.1)
- Added Recreation Resources – Commercial Services Guideline 2193: The Authorized Officer may consider exceptions for group sizes over 12 people and/or 14 head of stock on case-by-case basis through permit and operating plan; however, these exceptions would be rare and would not exceed the group size limit of 20 people and 25 head of stock.
- Edited Heritage, Archaeological and Cultural Resources Goal 2198: from “...while allowing...” to “...while managing...” (WMP Section 7.12)
- Clarified Tribal Rights and Interests Standard 21105: Coordinate and consult with tribes to maintain their right to gather fish, wildlife, plants, and access traditional cultural and religious sites while maintaining wilderness character. (WMP Section 7.13)
- Revised Rangeland Resources Standard 21116: Routine livestock management activities in wilderness, including maintenance, would normally be accomplished by non-motorized, non-mechanized means. Requests by grazing permittees for occasional use of motorized or mechanized equipment or vehicles would be evaluated on a case by case basis through a MRA. (WMP Section 7.14)
- Revised Rangeland Resources Standard 21113: Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation. (WMP Section 7.14)
- Revised Mineral and Geologic Resources Objective 21119: Where valid existing rights occur, provide direction for managing mineral activities in wilderness in accordance with agency directives and regulations and with consideration of all applicable state and federal requirements. (WMP Section 7.15)
- Revised Mineral and Geologic Objective 21121: Ensure lands disturbed during mineral exploration and development activities are restored as nearly as practicable promptly upon completion or abandonment of operations. Plans of operations will stipulate reclamation and bonding requirements of the authorized operator. (WMP Section 7.15)
- Revised Mineral and Geologic Standard 21122: The plan of operation must outline all terms and conditions for reclamation and rehabilitation of an area upon completion of mineral exploration or development activity, including a timeline for removing all

structures, equipment and support facilities for the operation and the area impacted by mineral operations must be restored as nearly as practicable to the contour and appearance of the landscape before operations commenced. (WMP Section 7.15)

- Revised portion of Research Guideline 21154 regarding research proposals to encourage, but not require use of the Framework to Evaluate Proposals for Scientific Activities in Wilderness (Landres 2010, or most current). (WMP Section 7.19)
- The ending portion of Search and Rescue Guideline 21162 was deleted to remove redundancy: "...for emergencies involving the life and safety of people in the wilderness." (WMP Section 7.20)
- Revised Zone 2 Standard 21169-Z2 to allow for existing class 3 trails. (WMP Section 7.21.2)
- Updated the public involvement section to include the comment period. (EA Section 1.4)
- Added Fort Bridger Treaty. (EA Section 2.8.2)
- Added paragraph about enforcing relevant laws, and posting information related to cultural resource protection. (EA Section 3.1.3)
- Deleted portion of quote from Keeping It Wild 2 that references "comfort facilities." (EA Section 3.3.2)
- Revised Wildlife portion under Naturalness (wilderness section) for Alt A, and Alt C to clarify statements about disease transmission. (EA Section 3.3.3)
- Revised Forest Plan Amendment to only include the two Sawtooth National Recreation Area General Management Standards. The WMP is referenced as the management approach for MA 21. (EA Appendix 2)
- Glossary Edits: added several new definitions; revised and expanded several definitions; added citations for definitions taken from policy.
- Renumbered direction throughout Plan and EA.

DECISION

I have reviewed the analysis presented in the EA for the CDAWC and HB WMP, considered the comments received on the draft WMP, and discussed the project's anticipated effects with both the Interdisciplinary Team, Forest Staff, and Region Staff. I have considered and incorporated the comments and input raised in staff to staff coordination meetings with Tribes, and comments from stakeholders and the public received on the draft WMP.

This project received ten objections on the draft decision notice an FONSI. The following parties objected:

- State Agency: Idaho Department of Fish and Game
- Non-governmental organizations: Idaho Conservation League/Wilderness Society, North American Packgoat Association, WildLands Defense, and White Cloud Outfitters
- Individuals: Dammann, Reynolds, Saphra, Warnke, and Robinson

My decision has also been reviewed by a Standing Objection Review Team (SORT). Through the course of the resolution process, Idaho Conservation League/Wilderness Society withdrew their objection. The

Objection Reviewing Officer, David Rosenkrance, Deputy Regional Forester, found that my decision rationale was clear and that objection issues were analyzed and addressed consistently with applicable laws and regulations. The Objection Reviewing Officer's did not provide instructions; however, his recommendations are addressed in the Rationale section, and include the following clarifications or changes to the WMP:

- Revised MRA direction and moved several standards to guidelines, including search and rescue flowchart), and the glossary definition for MRA
- Revised definition of developments
- Added "stock feed" to the definition of "Cache" in the glossary
- Added a guideline for Commercial Services, regarding group size exceptions
- Modified Zoning map of the Hemingway-Boulders Wilderness to include existing outfitter camp in Zone 4

I have decided to select and implement **Alternative A (Proposed Action – the WMP)** for the management of the CDAWC Wilderness and HB Wilderness. This decision also amends the Forest Plan to include a new management area (Management Area [MA] 21), which encompasses the entirety of the two wildernesses managed by the Forest Service, and to modify the portions of MA 3 and MA 4 to exclude the lands now designated as wilderness.

My decision includes direction for the preservation of wilderness character, while managing allowable uses of two Wilderness areas. Specifically, I am making the following decisions:

Direction	Alternative A—Proposed Action
Wilderness	
Standard	Use locally sourced native seed or plants where reseeding or replanting is determined necessary.
Standard	Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.
Standard	Assess impacts and determine if management actions are needed to maintain wilderness character (see "Wilderness Monitoring" section) if campsite and travel encounters increase by 10% or more over two reporting periods.
Standard	Assess impacts and determine if management actions are needed to maintain wilderness character if recreation site condition class increases by 5% or more over two reporting periods (see "Wilderness Monitoring" section).
Standard	Assess impacts and determine if management actions are needed to maintain wilderness character if total miles of user-developed routes (i.e., unauthorized trails) increase by 3% or more over two reporting periods (see "Wilderness Monitoring" section).
Standard	Ensure management activities are consistent with wilderness zone descriptions.
Guideline	Use natural openings for helicopter landing areas when needed for fire or emergency operations, to avoid impacts to wilderness character and minimize intrusions.
Wildlife Resources	
Standard	Require the following measures from the North American Packgoat Association to minimize contact between bighorn sheep and domestic goats used for packing: <ul style="list-style-type: none"> • All pack goats will be on leads or have leads attached to their collar or halter at all times. • All pack goats will be tethered at night within 30 feet of humans. • If bighorn sheep are observed within 100 yards of a potential camping area, pack goat users will take all reasonable measures to move their campsite to a different area.

Direction	Alternative A—Proposed Action
	<p>Hazing techniques may be used to deter bighorn sheep from moving closer to campsites if necessary.</p> <ul style="list-style-type: none"> • Pack goat numbers will be limited to a maximum of three (3) pack goats per person, and a maximum of nine (9) pack goats per group. • When bighorn sheep are using trails for travel pack goat users will move off the trail 100 yards. If that distance is not attainable, the pack goat user will travel back along the trail away from the bighorn sheep and exit the trail when the 100 yard distance can be reached. Pack goat users will stay off the trail until bighorn sheep have passed. If visibility is limited to less than 100 yards up trail, a pack goat user will go to the trail and observe for bighorn sheep before continuing with pack goats. • When accessing browsing areas and water, a pack goat user will check for the presence of bighorn sheep before allowing access for pack goats. Whenever possible, water access will be limited to areas of unlikely bighorn sheep use. • In event that direct contact of a pack goat and a bighorn sheep is observed, the location and as much of a description as is possible of the sheep and incident will be written, photographed if possible and reported to the appropriate agency as soon as reasonably possible. • If any pack goat becomes lost, missing or separated from the owner and herd every effort will be exhausted to locate and recover the lost pack goat. If the owner is unable to locate and recover the lost pack goat, contact the Sawtooth NRA by telephone immediately. A full disclosure of all available information will be provided including: the last known location (GPS coordinates, legal description, geographic location, name or number of trail or trailhead), the circumstances that resulted in it becoming lost, a description of the pack goat, and any equipment that it was carrying.
Standard	Prohibit pack goats within Pack Goat Exclusion Area, as described in Figure 4 of the WMP. The boundary was modified to provide clarity for pack goat users by following trails and natural geographic features, such as ridgelines and drainages.
Standard	Continue to work cooperatively with IDFG to reduce the risk of disease transmission or other stressors between bighorn sheep and domestic animals.
Recreation Resources	
Standard	Limit group size to a maximum of 12 people. (See exception for Native American tribes in the Tribal Rights and Interests section.)
Standard	Limit the combined number of recreational stock in one group to 14 head of stock.
Standard	Prohibit shortcutting trail switchbacks on foot or with recreational stock.
Standard	Only allow campfires below 8,800 feet elevation and within 200 yards of Walker Lake, Island Lake, Upper and Lower Chamberlain Lakes (9,477 and 9,197 feet), and Boorn Lakes.
Standard	Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-ups where topography does not allow tethering outside the 200 feet.
Standard	Limit tying of recreational stock to live trees to a maximum of one hour.
Standard	Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs.
Standard	Require human waste to be buried and covered, at least 200 feet from water, campsites, and trails; or packed out.
Standard	Prohibit recreational equine stock use within the following drainages: Slickenslide Creek above Quiet Lake; Boulder Chain Lakes Creek above Lodgepole Lake; Gunsight Creek; Bighorn Creek; and Big Boulder Lakes, excluding Walker and Island Lakes.

Direction	Alternative A—Proposed Action
Standard	Manage winter recreation to minimize conflict with high elevation wildlife species including mountain goats and wolverine.
Standard	<p>Remove the following trails from the Forest Service Trail inventory.</p> <p>Cecil D. Andrus-White Clouds Wilderness:</p> <ul style="list-style-type: none"> Trail #674 – Above O’Caulkins Lake to Warm Springs Creek (#671 junction; 3.9 miles); Trail #684 - Wickiup Creek (6.7 miles); and <p>Hemingway-Boulders Wilderness:</p> <ul style="list-style-type: none"> Trail #113 – the upper 5.2 miles of the South Fork of the East Fork of the Salmon River.
Guideline	Prevent human/wildlife encounters by emphasizing proper camping techniques and food storage and containment.
Guideline	Discourage off-trail route marking and remove user-created route markers (e.g., stacked rocks, flagging).
Guideline	Encourage use of no trace fires (i.e. use of fire pans or fire blankets).
Guideline	Maintain the voluntary registration system.
Recreation—Commercial Services	
Standard	Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g and BLM H-2930-1, BLM 6340 B.2(i)).
Standard	Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas.
Standard	Ensure operating plans for priority use and temporary use outfitting and guiding permits direct outfitters to model appropriate wilderness practices and incorporate awareness of wilderness values in their interaction with clients and others.
Guideline	The Authorized Officer may consider exceptions for group sizes over 12 people and/or 14 head of stock on case-by-case basis through permit and operating plan; however, these exceptions would be rare and would not exceed the group size limit of 20 people and 25 head of stock.
Scenic Environment	
Guideline	Build facilities and structures, when needed for resource protection, out of natural materials that blend into the natural environment.
Guideline	Do not consider visual conditions changed by natural events and processes as detrimental to scenic qualities.
Heritage, Archaeological and Cultural Resources	
Guideline	Develop a management strategy that includes, but is not limited to education/interpretation or signage outside of wilderness, or natural barriers to prevent additional damage if monitoring reveals that damage is occurring to cultural, archaeological, or historic resources. The wilderness specialist and archaeologist, in consultation with sovereign tribal governments and the State Historic Preservation Officer, will work together to develop the management strategy.
Rangeland Resources	
Standard	Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation.

Direction	Alternative A—Proposed Action	
Fire Management		
Guideline	Determine actions for each wildland fire that are consistent with protecting wilderness character while providing for firefighter and public safety, and considering impacts to private property and developed facilities in surrounding areas.	
Guideline	Avoid locating temporary wildfire management support facilities (e.g., spike camps, landing areas) in wilderness. When considered necessary, all efforts will be made to use areas with pre-existing impacts, outside of Zone 1. Responder safety will be the first consideration when making this determination.	
Guideline	Minimize suppression impacts to wilderness character by using MIST and assigning Resource Advisor(s) with knowledge, training, and/or experience in wilderness management. Return disturbance caused by suppression actions to as natural a condition as possible.	
Lands and Special Uses		
Standard	Consider the direction for each zone when evaluating a proposal; zone direction may influence where and how approval is granted.	
Wilderness Education and Interpretation		
Standard	Interpretive information may be included on trailhead information signs or communicated elsewhere outside of wilderness, but will not be located on signs in wilderness.	
Guideline	Emphasize a proactive approach to wilderness education. Build partnerships and relationships with organization camps, group organizations, businesses, school and university programs, permittees, permanent and seasonal staff, and other users to integrate Leave No Trace and wilderness ethics into their operations.	
Guideline	Communicate rules and regulations primarily outside of wilderness.	
Search and Rescue		
Guideline	Use the flow chart in Appendix 1 [of the WMP] for approval of motorized and mechanized emergency response.	
Guidelines	Use natural terrain features for helicopter landing areas. Care should be taken that vehicles used in SAR operations do not transport invasive species or cause unacceptable resource or social impacts. Immediately address any resource damage resulting from SAR operations.	
Management Zones		
Management Zones are established:	Cecil D. Andrus-White Clouds Wilderness: 96% Zone 1 3% Zone 2 0.5% Zone 3 0.6% Zone 4	Hemingway-Boulders Wilderness: 99% Zone 1 <1% Zone 2 <1% Zone 3 <1% Zone 4
Standard – Zone 1	Non-historic facilities, installations, or developments are not present in this zone unless authorized through a valid existing right or grazing permit or are the minimum necessary for administering as wilderness. No NFS trails are present in this zone.	
Standard – Zone 1	No signs are present except in extremely rare instances for resource protection in this zone. No permanent signs are allowed.	
Standard – Zone 2	The highest trail standard in this zone is Class 2, with the exception of the existing Class 3 trails in the Hemingway-Boulders Wilderness: the Upper North Fork #128 and the western end of the West Fork-North Fork #129.	
Standard – Zone 2	Non-historic facilities, installations, or developments are not present in this zone unless authorized through a valid existing right or grazing permit or are the minimum necessary for administering the area as wilderness.	

Direction	Alternative A—Proposed Action
Standard – Zone 2	No signs are present except in extremely rare instances as required for resource protection in this zone. No permanent signs are allowed.
Standard – Zone 3	The highest trail standard in this zone is Class 3.
Standard – Zone 3	Signs may be present at trail junctions and, in rare cases, may be found elsewhere for resource protection.
Standard – Zone 4	The highest trail standard in this zone is Class 3.
Standard – Zone 4	Signs may be present at trail junctions and may be infrequently used elsewhere for resource protection.

The effects of the plan amendment is documented in the environmental assessment following Forest Service NEPA procedures at 36 CFR Part 220. Because the appropriate NEPA documentation for this amendment is an environmental assessment, it is not considered a significant change to the plan for purposes of the NFMA (36 CFR 219.13(b)(3)).

I have determined that the directly affected substantive requirement affected by the proposed plan amendment is 219.10(b)(iv), "Protection of congressionally designated wilderness areas." This is based on the purpose and beneficial effect, as described in 36 CFR 219.13(b)(5)(i). The purpose of the amendment is to provide consistency between the Forest Plan and the wilderness management plan, which was written to preserve wilderness character. The scope of the plan amendment is all Forest Service activities that would be implemented with approval of the CDAWC and HB Wilderness Management Plan and all future activities in the two Wilderness areas that fall within management under the Sawtooth Forest Plan. The scale of the plan amendment is the HB and CDAWC Wilderness areas within the administrative boundary of the Sawtooth National Forest. Based on scoping, the analysis for the environmental assessment, and comments, no significant effects were identified; therefore, no substantive requirements would be directly affected due to substantial adverse effects, as described in 219.13(b)(5)(ii)(B).

See Appendix 2 of the EA for the Forest Plan Amendment. All future projects and activities must be consistent with the amended plan. The 2012 Planning Rule consistency provisions at 36 CFR 219.15(d) apply only to the plan component(s) added or modified under the 2012 Planning Rule. The consistency requirement applies only to plan standards and guidelines. (FSH 1909.12, ch. 20, sec. 21.33.)

RATIONALE FOR THE DECISION

I have evaluated the three alternatives (Alternative A, B and C) analyzed in the EA. I have selected **Alternative A (Proposed Action – the WMP)** because it provides the greatest attainment of the project's purpose and need – preserving wilderness character - while still being sensitive to allowable uses and resource concerns within the CDAWC Wilderness and the HB Wilderness. The WMP will guide management so that the preservation objectives of the Wilderness Act can be met.

The proposed action has been analyzed and describes that there are no significant impacts as referenced in the attached Finding of No Significant Impact (FONSI). In making this decision, I evaluated the purpose and need for the WMP, the effects disclosed in the EA, and comments received during scoping, and the 30-day notice and comment period (36 CFR 218). The following discussion summarizes the rationale for my decision.

I believe the three indicators described under the wilderness section will capture changes to the environment (recreation site condition class, and user-developed routes) and changes to opportunities for

solitude and the social setting (campsite and travel encounter), thus allowing the agency to consider appropriate response depending on the causal factors. My decision to implement the direction for monitoring will ensure these indicators are tracked over time.

My decision to implement the proposed action for management of wildlife resources aims to preserve the natural quality of the two Wilderness areas. Requiring pack goat management measures, along with the Pack Goat Exclusion Area within the CDAWC Wilderness are the appropriate methods for minimizing the risk of pathogen transmission from pack goat to bighorn sheep in the context of these two Wilderness areas. The Pack Goat Exclusion Area was developed based on best available science, including the 2016 radio telemetry data collected by the Idaho Department of Fish and Game. The data shows summer use by bighorn sheep in the CDAWC Wilderness. The exclusion area will reduce the risk of pathogen transmission by reducing direct overlap in this region of known bighorn sheep use.

The pack goat exclusion area may also be described by drainage: Slate Creek drainage above the mouth of Hoodoo Lake Creek outlet, Livingston Creek drainage above the 2 mile point of the Livingston Creek Trail (#673), the east side of the Warm Springs Creek drainage from the mouth of Swimm Creek, including the Swimm Creek drainage, to the headwaters, excluding Boorn Lakes and trail #671, Big Boulder Creek drainage, and above Hidden Lake and Lonesome Lake at the head of Little Boulder Creek. See Figure 4 Map of the Pack Goat Exclusion Area in the WMP (p. 32).

While having agency personnel present to enforce the best management practices for pack goat use will be challenging, these practices were established by the North American Packgoat Association, and pack goat users may already be familiar with them. This approach will allow for pack goat users to continue to enjoy the majority of the wilderness (outside of the Pack Goat Exclusion Area), while reducing the risk of pathogen transmission to bighorn sheep.

Commenters provided input on both sides of the pack goat management topic: some comments promoted banning pack goat use in both wilderness areas; whereas other comments included rationale for allowing pack goat use with a variety of management techniques. We considered the rationale for both arguments, and the various suggestions for managing pack goat use. My decision is to exclude pack goat use from the portion of the wildernesses most heavily used by bighorn sheep. In the remaining areas of the wilderness, measures promoted by the North American Packgoat Association will help maintain spatial separation between bighorn sheep and pack goat users. No vaccination for pack goats is currently available, and research on disease transmission is on-going.

A thorough research review regarding pathogen transmission to bighorn sheep was completed for the EA. The research by Dr. Highland, and additional information regarding the presence of *M. ovipneumoniae* in animals other than pack goats and domestic sheep have been considered, but do not change the conclusions found in the wildlife specialist report, the EA, or this decision and FONSI.

With this exclusion in place, 17% (26,773 acres) of the two wilderness areas; or 29% of the CDAWC Wilderness would be unavailable to pack goat users. The exclusion area includes 6.4 miles of trails which would be unavailable to pack goat users. Because 71% of the CDAWC Wilderness and 86% of trails in the CDAWC Wilderness are still available, there would be minimal impact on their use of the wilderness.

Based on current information, risk to the East Fork Herd of bighorn sheep indicates that the pack goat exclusion area is warranted. I recognize that new developments in scientific research, and techniques for using pack goats in a bighorn sheep core herd area (e.g. vaccinations) will evolve and may change the need for an exclusion area. The exclusion area may be reconsidered as best management practices are refined, monitoring and scientific research is furthered, and/or permitting and testing methods are improved.

My decision includes management of recreational uses within the two wilderness areas to protect natural resources and the untrammelled quality, while preserving opportunities for solitude, and primitive and unconfined recreational opportunities. Establishing limits on group sizes for both people (12 people

maximum per group) and recreational stock (14 head maximum per group), prohibiting campfires above 8,800 feet (with certain exceptions), establishing requirements for recreational stock handling, and managing winter recreation will preserve wilderness character, ecological function, and wildlife and vegetation resources while minimizing the impact to recreational opportunities. The voluntary registration system will continue to provide valuable user data to guide decision making.

It is my decision to implement the equine stock closure areas within the CDAWC Wilderness, as this area includes fragile, alpine vegetation, and is often terrain limiting to equine stock. Terrain limitations may be apparent to visitors familiar with the area, whereas it may not be apparent for other visitors. Closing these areas to equine stock use provides important pre-trip information for users and prevents use in sensitive areas.

My decision removes the portion of Trail #674 above O'Caulkins Lake to Warm Springs Creek (3.5 miles), Trail #684 - Wickiup Creek (6.7 miles), and the upper 5.2 miles of Trail #113 - South Fork of the East Fork of the Salmon River from the Forest Service trail inventory. Based on this revision to the trail inventory, no closures will be implemented, or reclamation actions required. No regular future maintenance would occur, nor would these trails be presented on Forest Service maps. The trails are removed from the inventory because the majority of the trail tread was not visible or apparent at the time of designation of the wilderness areas. This is in maintaining the conditions prevailing at the time of congressional designation.

We received several comments regarding commercial outfitting and guiding services. Outfitting and guiding is specifically addressed in the Wilderness Act and reiterated in the enabling legislation as a legitimate commercial use in wilderness. The agencies also recognize the value of outfitting and guiding to the recreating public. My decision includes direction specific to outfitting and guiding that aligns with the act, agency policies, and retains and perpetuates wilderness character as it pertains to all users and the resource. In response to comments, some modifications were made to terminology throughout the document to better clarify the role of outfitters and guides in maintaining wilderness character. These modifications do not change the intent of the proposed alternative or my decision. In particular, standard 2189 provides flexibility for the Forest Service to work with the outfitters regarding existing structures in assigned camps (e.g. tent frames), consistent with the preservation of wilderness character.

The affected environment description included an incorrect statement with regard to facilities at assigned outfitter camps. A review of outfitter permits and operating plans do not include "stock watering trough and waterline." These facilities are not present (see attached Errata Sheet).

Several commenters disagreed with the term enhance, such as in Goal 2103 "Protect and enhance wilderness character." As noted above, under the purpose and need, the Wilderness Act (Section 4) requires that "... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area." As described in agency policy (FSM 2320.6), including the diagram relating wilderness character to human influence, the agency mandate is to preserve or improve wilderness character. The direction in this goal must also comply with the Wilderness Act, and meet direction for the minimum necessary for the administration of the area as wilderness (Standard 2122 and 2123). The broad, higher lever direction (Goal 2103, 2109, Objective 2195, and a Zone 2 Desired Condition) was revised to use the terms "protect" and "preserve" rather than enhance. Management activities, such as reclamation, may be implemented to improve wilderness character over time.

My decision includes the establishment of management zones across the two wilderness areas. Zones were developed based on conditions prevailing at the time of designation, including visitor use levels and patterns, and desired conditions to prevent degradation to wilderness character, and ecological functioning. This strategy acknowledges the variation across the landscape: Zone 1 is the most primitive with the least visitation, and Zone 4 includes the most heavily used areas with existing impacts. Plan direction aims to preserve the wilderness values and resources present within each zone. Management zone direction will guide future activities, in accordance with this decision, to avoid unacceptable

degradation of wilderness resources. Additionally, this decision includes direction related to commercial services, fire management, and lands and special uses within management zones. One adjustment to the management zones has been made since the draft DN to ensure an existing assigned outfitter camp is within Zone 4 in the Hemingway-Boulders Wilderness (see attached Errata Sheet).

My decision regarding educational efforts in wilderness aims to facilitate recreational activities, and preserve overall wilderness character. Education allows the agency to be proactive and adaptive when managing visitor use in order to protect both the physical and social settings. Following this decision, the Forest Service will work with wilderness rangers, volunteers and partner organizations, as well as agency law enforcement to implement the direction established herein. This decision does not apply to mandatory permits. The Forest Service will focus on other means of education to meet the purposes of educating on regulations, Leave No Trace, and other messages.

Additional direction described in the WMP is related to established policy or law, and is not analyzed in the EA, nor does it require a decision to implement, or was previously analyzed previously in the Forest Plan.

Commercial livestock grazing occurred at the time of designation, and this WMP does not change or affect these operations.

Each of the alternatives considered in the EA has benefits and shortcomings relative to the purpose and need, issues, and/or public concern. The purpose and need was developed based on the Wilderness Act, and through direction in the Forest Plan and other national and regional laws and policies. Among the alternatives evaluated, I believe Alternative A best meets the project purpose and need, and contains the direction to preserve wilderness character. Alternative A will be the most effective of the alternatives in managing recreational and other allowable uses, while applying moderate visitor restrictions to reduce environmental impacts.

Additional Clarity for the EA Analysis

The wilderness cumulative effects section (Alternative A) will be amended for extra clarity, but this addition will not change the conclusions of the EA or this DN/FONSI: “Summary of Cumulative Effects: The effects analysis above details the relatively minor direct and indirect effects of this alternative. Many of the proposed actions are designed to better protect wilderness character, including group size limits, campfire restrictions, and recreational stock management. These actions would be a cumulative, minor to moderate adverse effect to opportunities for primitive and unconfined recreation, while preserving the untrammeled, undeveloped, natural, and opportunities for solitude qualities. None of the impacts were found to be significant.”

PUBLIC AND OTHER INVOLVEMENT

Public Involvement

Public involvement has been extensive throughout the planning and analysis process leading to this document. The agencies provided a monthly newsletter, beginning in October 2016, via email to stakeholders to provide regular planning updates.

The scoping period for the draft WMP occurred November 21, 2016 through January 31, 2017 (71 days). In December, open house meetings were offered to the public in Challis, Ketchum, and Stanley, Idaho. Several news outlets included the scoping period information, including News 8 and the Idaho Mountain News. The agencies also posted information on their respective webpages and social media sites. During this scoping period, 70 letters were received.

The 30-day opportunity to comment on the proposed plan (per 36 CFR 218 Subparts A and B) occurred October 27-November 27, 2017 and included public meetings in Mackay, Challis, Stanley, and Ketchum

(November 1, 13 and 14, 2017). A legal notice was issued in the *Times News*, the paper of record on October 27, 2017. During this time, 33 parties submitted written comments.

Government and Agency Consultation

Scoping letters were sent to the U.S. Fish and Wildlife Service and NOAA Fisheries representatives via email on November 29, 2016, soliciting input on the draft WMP. Biological assessments (BA) consistent with requirements of Section 7 of the Endangered Species Act were prepared. See Endangered Species Act section below for more information on determinations.

The Forest Service and BLM met with Idaho Department of Fish and Game during the scoping period on December 7, 2016.

Coordination with Custer County Commissioners and the Custer County Natural Resource Advisory Committee occurred throughout the planning process. Representatives from each federal agency attended the monthly Custer County Commissioners meeting, with discussions regarding the planning process initiating shortly after the designation of the wildernesses. The Forest Service and BLM provided the Commissioners with a briefing on the WMP on November 18, 2016, prior to the scoping period. Additional coordination between the federal agencies and the Custer County Commissioners, occurred August 8, 2017 to discuss the wilderness plan process, October 17, 2017 prior to the start of the comment period, and April 27, 2018, prior to the initiation of the objection period.

The Forest Service also provided Blaine County Commissioners with updates regarding the planning process. During the scoping period, Forest Service and BLM staff provided a briefing to the Commissioners on January 3, 2017. Prior to the comment period, the agencies met with the Commissioners on October 10, 2017.

Government to Government Tribal Consultation

Tribal governments have a unique legal and political relationship with the United States government as reflected in the United States Constitution, treaties, statutes, court decisions, executive orders, and memoranda. The Forest Service attended Wings and Roots meetings with the Shoshone-Paiute Tribes during the development of the WMP and EA. The WMP was introduced to the Tribes in November 2016 at the Wings and Root Meeting, and the Tribes were provided an overview of the proposed WMP in February 2017, with a follow-up in April 2017. Additional discussion of the project occurred at Wings and Roots Meetings in October and November 2017. At the December 2017 meeting, the Tribes had no further comments for the project.

The Forest Service met with the Shoshone-Bannock Tribes in staff-to-staff meetings in January and November 2017 and at regular technical meetings for updates. The Nez Perce Tribe and the Shoshone-Bannock Tribes were sent letters November 21, 2016 and October 26, 2017, concurrent with the start of the scoping and comment periods.

OTHER ALTERNATIVES CONSIDERED

In addition to the selected Alternative A, two alternatives were developed and analyzed in detail in the EA: Alternative B (Natural-Focus Alternative) and Alternative C (Minimum Management). The discussion below summarizes my rationale for not selecting either of these alternatives.

Alternative B (Natural-Focus Alternative) – Alternative B emphasizes protection of wilderness character with a management approach aimed at protecting wildlife, and opportunities for solitude and primitive recreation by applying additional restrictions on visitor use. This alternative prohibits pack goat use, restricts campfire use to Zones 3 and 4, and when compared with Alternative A, proposes smaller group size limits for people and recreational stock in Zone 1. This alternative also includes larger areas in which equine stock would be prohibited, and considers mandatory permits for all users, and in office permits for large groups (8 or more), or groups with recreational stock that remain overnight.

While Alternative B includes additional direction for the protection of wilderness character and wildlife, it would be at the expense of additional regulation on recreational uses. I considered public input both in support and opposition of this alternative. Comments generally addressed the complete ban on pack goat use, smaller group size limits, or the limited area allowed for campfire use. Commenter concerns about disease transmission to bighorn sheep contend that the only way to prevent disease transmission is to keep pack goats out of bighorn sheep habitat. While elimination of pack goat use entirely from the two wilderness would provide the lowest risk among the alternatives, I prefer to manage the existing use rather than entirely prohibit it. I believe the selected alternative best balances reduced risk of disease transmission while managing for on-going recreational use.

This Alternative would have applied more stringent group size restrictions in Zone 1 (8 persons and 10 head of stock), and (similar to the selected alternative) a maximum of 12 persons or 14 head of stock in Zones 2, 3, and 4. Comments in support of this alternative typically pointed to the impacts of large stock groups and recommend the smaller size to better protect vegetation and soils where stock travel or are tied up. Most visitors travel and camp in groups less than 12 in these areas, so this additional restriction would not pose substantial additional protections over the selected alternative. Further, we considered the complexity of group size limits in the region that recreationist would have to adhere to (e.g. unlimited group sizes nearby, 20 people and 25 head of stock outside the wilderness). This additional restriction within certain parts of the wilderness areas was determined to be overly restrictive.

Comments in support of the campfire restrictions described under Alternative B pointed to benefits, such as increased retention of dead and down wood, protection of whitebark pine, protection of wildlife habitat (e.g. wolverine habitat). The campfire proposal under this alternative would restrict campfire use to 1% of the two wilderness areas, whereas the selected alternative (Alternative A) would continue to allow visitors to have campfires in the more remote areas of the wildernesses (e.g. warming fires for hunters).

This alternative was not selected as it does not best meet the purpose and need of the project. Through the analysis presented in the EA, the level of restrictions posed in Alternative B are not necessary to maintain wilderness character.

Alternative C (Minimum Management) – Under Alternative C, the wilderness would be managed solely according to legislative and regulatory requirements, including the Wilderness Act, agency-specific policy (BLM Manual 6340, FS Manual 2320, among others), BLM Challis Field Office Resource Management Plan (1999), and the Forest Service Sawtooth Forest Plan (2012), without a more proactive management approach to address uses and protect wilderness character.

These areas have been managed as recommended wilderness, which included a number of restrictions (group size, campfire use) that have been in place prior to the designation of wilderness. Under this alternative these restrictions would remain in place, unaltered. The current regulations are not sufficient to adequately meet the needs laid out in the purpose and need above.

This alternative does not include management of pack goats, which would not adequately address the risk of disease transmission to bighorn sheep. This alternative would result in the highest risk of contact among the alternatives. Similarly, this alternative would not include management of recreational stock, which would not protect sensitive riparian and alpine vegetation, including whitebark pine.

Current restrictions on group size (20 people and 25 head of stock) are too large for existing campsites and these large sizes can be ineffective at reducing resource impacts and protecting natural conditions. Impacts to wildlife and wildlife habitat, including high elevation whitebark pine would remain constant or may increase with the large group size under this alternative. While this alternative would continue existing campfire restrictions, it would not address campfire impacts occurring in other locations in the wilderness areas.

Alternatives Considered, but Not Analyzed – In addition to the above alternatives, one other alternative was considered, but not analyzed, and that was the No Action Alternative. A true No Action Alternative

would not comply with law or policy, because the Forest Service is required to manage designated wilderness according to standards that were not in effect prior to the designation. Further, the enabling legislation requires the agencies develop "wilderness management plans for the wilderness areas."

CONSISTENCY WITH THE FOREST PLAN, NFMA, AND OTHER LAWS

FOREST PLAN

This decision amends the Forest Plan to include a new management area (MA 21) and its direction, which encompasses the entirety of the two wildernesses managed by the Forest Service, and to modify the portions of MA 3 and MA 4 to exclude the lands now designated as wilderness.

NATIONAL FOREST MANAGEMENT ACT (NFMA)

My decision does not include the harvest, cutting, or manipulation of any vegetation subject to the seven requirements in 36 CFR 219.27(b).

OTHER LAWS

As summarized below, my decision is consistent with Federal, State, and local laws or requirements imposed for the protection of the environment.

Endangered Species Act

The EA discloses the effects of my decision to threatened or endangered species (EA, Section 2.8.1). This required disclosure involves wildlife and fish species listed under the Endangered Species Act of 1973, as amended (ESA). Alternative A would have a *may affect, not likely to adversely affect* determination for listed wildlife species (Canada lynx); a *will not jeopardize* the continued existence for wildlife species proposed for listing (wolverine); and *no effect* to steelhead, bull trout, and Chinook salmon or their designated critical habitat. Designated critical habitat for Canada lynx is not in the project area.

The Wilderness Act and the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act

The Wilderness Act of 1964 (Public Law 88-577; 16 U.S.C. 1131) was enacted by Congress to "secure for the American people, an enduring resource of wilderness for the enjoyment of present and future generations". This act was passed "in order to ensure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition..."(Section 2 [a]).

The *Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act* (P.L. 114-46), which under Sec. 102 Administration, states "(a) IN GENERAL.- Subject to valid existing rights, each wilderness area shall be administered by the Secretary in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.)..." Additionally, P.L. 114-46 requires: "Not later than 3 years after the date of enactment of this Act, the Secretary of Agriculture and the Secretary of Interior shall collaboratively develop wilderness management plans for the wilderness areas."

As analyzed in the EA (Section 3.3), my decision will preserve overall wilderness character. Alternative A would benefit or maintain the qualities of untrammeled, natural, undeveloped, and outstanding opportunities for solitude or primitive and unconfined recreation, while balancing the impacts to outstanding opportunities for primitive and unconfined recreation resulting from additional visitor regulation.

Clean Water Act, The Federal Water Pollution Control Act of 1972 (PL 92-500) as amended in 1977 (PL 95-217) and 1987 (PL 100-4)

My decision is consistent with the Clean Water Act and its amendments and will provide excellent management direction for water resources. This decision incorporates standards and guidelines which will ensure protection of soil and water resources.

Migratory Bird Treaty Act

My decision will comply with the Migratory Bird Treaty Act (EA, Section 2.8.4). The proposed action will not result in 'take' of any migratory birds. In addition, this project complies with Executive Order 13186 because the analysis meets agency obligations as defined under the January 16, 2001 MOU between the Forest Service and U.S. Fish and Wildlife Service designed to complement Executive Order 13186.

National Historic Preservation Act

My decision will have no direct, indirect, cumulative effects on cultural resources and is consistent with the National Historic Preservation Act (EA, Section 3.1.3).

The Clean Air Act, as amended in 1990

My decision is consistent with the Clean Air Act and its amendments and will provide excellent management direction for water resources (EA, Section 3.1.1).

American Indian Religious Freedom Act, Executive Order 12875, Executive Order 13007, Executive Order 13175, and Native American Graves Protection and Repatriation Act

The American Indian Religious Freedom Act, Public Law No. 95-341, 92 Stat. 469 (Aug. 11, 1978) (commonly abbreviated to AIRFA), is a United States federal law and a joint resolution of Congress that was passed in 1978. AIRFA was enacted to protect and preserve the traditional religious rights and cultural practices of American Indians, Eskimos, Aleuts, and native Hawaiians. Executive Order 13175 established a requirement for regular and meaningful consultation between federal and tribal government officials on federal policies that have tribal implications. Executive Order 12785 was enacted in order to reduce unfunded mandates upon State, local, and tribal governments; to streamline the application process for and increase the availability of waivers to State, local, and tribal governments; and to establish regular and meaningful consultation and collaboration with State, local, and tribal governments on Federal matters that significantly or uniquely affect their communities. Executive Order 13007 was enacted in order to protect and preserve Indian religious practices. The Native American Graves Protection and Repatriation Act provides a process for museums and Federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations.

Three federally recognized Native American tribes have expressed interest in activities proposed in this area: Nez Perce, Shoshone-Bannock, and Shoshone-Paiute Tribes. The Sawtooth National Forest has established staff to staff relationships with resource management departments with these Tribes and formal Government to Government consultations to have early and often communication regarding proposed actions on the Forest and potential effects to sensitive Tribal resources or traditional cultural properties. Mailings, meetings, and consultation are summarized above in the Government to Government Tribal Consultation section of this decision.

Nez Perce Treaty of 1855 and 1863, Shoshone-Bannock Tribes Fort Bridger Treaty of 1868, Shoshone-Paiute Tribes Executive Order of 1877

The Nez Perce Tribe, Shoshone-Bannock Tribes and Shoshone-Paiute Tribes are sovereign nations who work with the Federal government and its agencies through the process of government-to-government consultation. The Federal trust relationship with each tribe was recognized by, and has been addressed

through, the Constitution of the United States, treaties, executive orders, statutes, and court decisions. The ancestors of the modern day Nez Perce, Shoshone-Bannock, and Shoshone-Paiute were present in the area long before the establishment of the Sawtooth National Forest and continue to use the land to this day. Many of the treaties and executive orders signed by the United States government in the mid-1800s reserved homeland for the tribes. Additionally, the treaties with the Nez Perce and Shoshone-Bannock Tribes reserved certain rights outside of established reservations, including fishing, hunting, gathering, and grazing rights.

My decision includes management approaches developed for other resources which also protect tribal resources.

Environmental Justice (Executive Order 12898)

My decision will have no disproportionately high and adverse human health impacts, including social and economic impacts, on minority or low-income human populations (EA, Section 2.8.5).

Best Available Science

The conclusions disclosed in the EA and summarized in this document are based on a review of the relevant scientific information and opposing views where raised by internal or external sources, and the acknowledgement of incomplete or unavailable information, scientific uncertainty, and/or risk where pertinent to the decision being made.

The direction in the Forest Plan amendment applies standards for general management of the Sawtooth National Recreation Area to the new MA 21. This direction was established for MAs 3 and 4, and would be applied consistently to the new MA for the two wilderness areas. This direction is derived from P.L. 92-400, which established the Sawtooth National Recreation Area.

Idaho Roadless Rule

Within the project area, all lands previously identified as roadless under the Idaho Roadless Rule, were designated as wilderness on August 7, 2015. This rule no longer applies to lands designated as wilderness.

FINDING OF NO SIGNIFICANT IMPACT

I have reviewed the Council on Environmental Quality Regulations for significance (40 CFR 1508.27) and have determined that this decision is not a major federal action that would significantly affect the quality of the human environment, either individually or cumulatively. Preparation of an environmental impact statement pursuant to Section 102 (2)(c) of the National Environmental Policy Act of 1969 is not warranted. This determination is based on the following factors as outlined in 40 CFR 1508.27.

1. The selected alternative will be limited in geographic application [40 CFR 1508.27(a)].

Activities associated with my decision will be confined to the CDAWC Wilderness and HB Wilderness. As defined in the purpose and need and the proposed action, my decision is restricted to National Forest System Lands within the two Wilderness areas. There is no private land within the two wilderness areas.

2. My decision will not result in any significant beneficial or adverse effects [40 CFR 1508.27(b)(1)].

The environmental assessment has considered both beneficial and adverse impacts of the wilderness management plan. Overall, the plan will result in protection of wilderness character, which includes untrammeled, naturalness, undeveloped, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and other features of value. Preserving the natural ecosystem and opportunities for recreation would improve the quality of the human environment.

The analysis documented in Chapter 3 of the EA did not identify any individually or cumulatively significant impacts resulting from implementation of the WMP (EA Chapter 3). The project record

contains additional technical reports. In considering the wilderness resource as a whole, I have determined that the effects to wilderness character will not be significant.

3. The selected alternative will not result in significant effects on public health or safety [40 CFR 1508.27(b)(2)].

The proposed WMP would not result in significant effects on public health and safety.

4. My decision will not result in any significant effects on any unique characteristics of the geographic area, historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas [40 CFR 1508.27(b)(3)].

The planning area encompasses designated wilderness. Congress designated the CDAWC Wilderness and HB Wilderness to ensure protection of wilderness character. The Wilderness Act (Section 2a) states that wilderness areas "shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character." The EA describes affects to the wilderness resource, and concludes that the WMP would not result in significant effects (EA Chapter 3).

As stated in the EA, there will be no adverse effects to historic or cultural resources (EA, Section 2.8.3). No designated wild and scenic rivers, park lands, or prime farmlands, were identified in the project area. Wetlands have been identified in the wilderness areas, but no effects are anticipated from the selection of Alternative A. Similarly, the wilderness areas include alpine ecosystems with sensitive vegetation and wildlife. These ecologically critical areas are present, and the decision would protect these areas.

5. The selected alternative will not result in any effects that are likely to be highly controversial [40 CFR 1508.27(b)(4)].

Controversy in this context refers to situations where there is substantial dispute as to the size, nature, or effect of the federal action, rather than opposition to its implementation. The scientific basis for the analysis is contained in the project record and summarized in the EA. Standard analysis techniques and models were used. Literature supporting the use of these models and qualitative discussions, as used in this analysis, is contained in the project's planning record (EA Chapter 3).

6. The effects associated with the Selected Alternative will not result in any highly uncertain, unique, or unknown risks [40 CFR 1508.27(b)(5)].

The environmental analysis, including the EA, resource technical reports, and biological evaluations (contained in the planning record), determined that the selected alternative will not involve any highly uncertain or unknown risks (EA, Chapter 3). The management activities associated with my decision are typical of those successfully implemented in the past for other designated wilderness areas.

7. My decision does not establish a precedent for future actions with significant effects nor does it represent a decision in principle about a future consideration [40 CFR 1508.27(b)(6)].

My decision is consistent with direction found in the Forest Plan. Implementing my decision will not establish a precedent for future actions with significant effects nor does it represent a decision in principle about a future consideration.

8. The analysis documented in the EA discloses that my decision will not result in any significant short-term, long-term, or cumulative effects [40 CFR 1508.27(b)(7)].

Chapter 3 of the EA discloses that the Alternative A will not result in any known significant temporary, short term, long term, or cumulative effects.

9. My decision will not adversely affect sites or objects listed or eligible for listing in the National Register of Historic Places, nor will it cause the loss or destruction of significant scientific, cultural, or historic resources [40 CFR 1508.27(b)(8)].

My decision will not result in the loss or destruction of important or significant scientific, cultural, or historic resources (EA, Chapter 3).

10. My decision will not adversely affect threatened or endangered species or their habitats [40 CFR 1508.27(b)(9)].

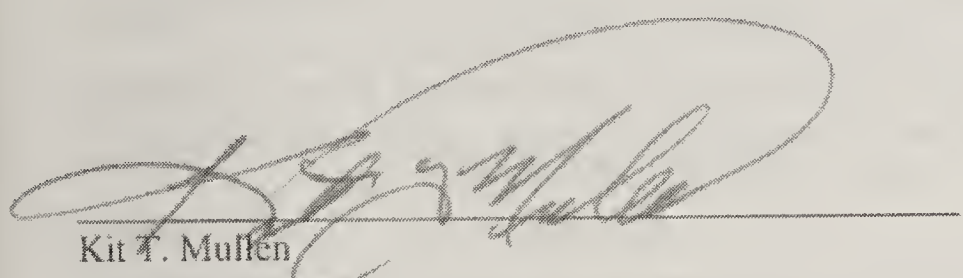
As described above under "Endangered Species Act", my decision will not adversely affect any endangered or threatened species or their habitats.

11. My decision is consistent with Federal, State, and local laws and requirements imposed for the protection of the environment [40 CFR 1508.27(b)(10)].

Consistency with laws or requirements imposed for protection of the environment is discussed above under "Consistency with Forest Plan and with Laws and Regulations," and Section 2.8 of the EA (Compliance with Laws, Regulations, Executive Orders, and State Statutes). The project's planning record provides supporting information.

IMPLEMENTATION

Implementation may begin immediately following approval of the wilderness management plan (36 CFR 219.17(a)(2)).



Kit T. Mullen
Forest Supervisor
Sawtooth National Forest



Date

Errata Sheet for the Wilderness Management Plan

7.20. Search and Rescue

Direction 21159 referenced the flow chart in Appendix 10. The correct reference is Appendix 1 in the WMP.

7.21. Management Zones

The map (Figure 8. Hemingway-Boulders Wilderness proposed zoning, p. 48) was modified to include the existing White Cloud Outfitters assigned camp within Zone 4 consistent with the adjacent South Fork Trail #112.

Errata Sheet for the

Environmental Assessment

3.3.2. Affected Environment (Wilderness)

P. 46 of the EA included this language:

Two campsites are assigned to stock outfitters in the Cecil D. Andrus-White Clouds Wilderness, one at Chamberlain Lake and one at Little Boulder Creek. The only assigned camp in the Hemingway-Boulders Wilderness is located on the South Fork of the East Fork River. These sites have some level of development, including tent frames, framed outhouses, jack fences, stock watering trough with waterline, and caches with cook gear and tools. Many of these developments remain in place year-round.

The reference to “stock watering trough with waterline” was erroneous and should be removed from this paragraph for accuracy.

3.3.3 Environmental Effects (Wilderness)

p. 55 references Appendix 3 for the table of trails within closure areas. The correct reference should be Appendix 1 in the EA.

Acronyms, Initialisms, and Abbreviations

AFWA	Association of Fish & Wildlife Agencies
ATV	all-terrain vehicle
BA	biological assessment
BE	biological evaluation
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
EA	environmental assessment
EIS	environmental impact statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
Forest Plan	Land and Resource Management Plan
Forest	Sawtooth National Forest
FRCC	Fire Regime Condition Class
FSH	Forest Service Handbook
FSM	Forest Service Manual
GHG	greenhouse gas
GPS	Global Positioning System
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IMPROVE	Interagency Monitoring of Protected Visual Environments
IOGLB	Idaho Outfitter and Guide Licensing Board
IVUMC	Interagency Visitor Use Management Council
LAU	Lynx Analysis Unit
MA	Management Area
MBTA	Migratory Bird Treaty Act
MIS	Management Indicator Species
MIST	minimum impact suppression tactics
MPC	Management Prescription Category
MOU	Memorandum of Understanding
MRA	Minimum Requirements Analysis

NEPA	National Environmental Policy Act
NFS	National Forest System
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NRA	National Recreation Area
NIFC	National Interagency Fire Center
NEPA	National Environmental Policy Act
NFS	National Forest System
NRA	National Recreation Area
ORV	Outstandingly Remarkable Values
RMP	Resource Management Plan
RNA	Research Natural Area
ROS	Recreation Opportunity Spectrum
SAR	search and rescue
SHPO	State Historic Preservation Office
SGCN	Species of Greatest Conservation Need
TMDL	Total Maximum Daily Load
USC	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of Interior
USFWS	United States Fish and Wildlife Service
UTV	utility vehicle
VQO	Visual Quality Objectives
WAQV	Wilderness Air Quality Values
WMP	Wilderness Management Plan
WSA	Wilderness Study Area (BLM designation)

Table of Contents

1. Introduction.....	1
1.1. Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act.....	1
2. Wilderness Overview	1
2.1. Hemingway-Boulders Wilderness	3
2.2. Cecil D. Andrus-White Clouds Wilderness	3
2.3. Scope of the Wilderness Management Plan.....	4
3. Purpose of and Need for the Wilderness Management Plan.....	5
4. Consistency with Forest Service and Bureau of Land Management Use Plans	6
4.1. Existing Management Direction	6
4.1.1. Sawtooth Forest Plan	6
4.1.2. Challis Resource Management Plan.....	7
5. Issues Resolved by Policy.....	7
6. Management Area 21	8
6.1. Management Area Description	8
6.1.1. General Location and Description	9
6.2. Wilderness Character	9
6.3. Access	13
6.4. Air Quality	13
6.5. Soil, Water, Riparian, and Aquatic Resources	14
6.6. Vegetation	15
6.7. Botanical Resources.....	16
6.8. Non-native Plants.....	16
6.9. Wildlife Resources.....	16
6.10. Recreation Resources.....	17
6.11. Cultural Resources	20
6.12. Rangeland Resources	20
6.13. Mineral Resources	21
6.14. Fire Management	21
6.15. Lands and Special Uses.....	22
6.16. Management Direction.....	22
6.16.1. General Direction	22
6.16.2. Regulation and Policy	22
6.16.3. Desired Condition	23
6.16.4. Management Prescription Category 1.1—Existing Wilderness.....	23
7. Proposed Action	24
7.1. Wilderness.....	25
7.2. Sawtooth National Recreation Area General Management	27
7.3. Eligible Wild and Scenic Rivers	28
7.4. Air Quality	28
7.5. Soil, Water, Riparian, and Aquatic Resources.....	28
7.6. Vegetation	29
7.7. Botanical Resources.....	29
7.8. Non-native Plants.....	29
7.9. Wildlife Resources.....	30
7.10. Recreation Resources.....	33
7.10.1. Commercial Services	37
7.11. Scenic Environment	39

7.12. Heritage, Archaeological and Cultural Resources	39
7.13. Tribal Rights and Interests	40
7.14. Rangeland Resources	40
7.15. Mineral and Geologic Resources	42
7.16. Fire Management	42
7.17. Lands and Special Uses.....	43
7.18. Wilderness Education and Interpretation	44
7.19. Research.....	45
7.20. Search and Rescue	45
7.21. Management Zones.....	46
7.21.1. Zone 1	50
7.21.2. Zone 2	50
7.21.3. Zone 3	51
7.21.4. Zone 4	52
8. Wilderness Monitoring.....	53
9. Plan Implementation	54
9.1. Activities Associated with Plan Implementation	54
9.1.1. Ongoing Activities	54
9.1.2. Future Activities.....	54
10. Plan Evaluation	54
11. Glossary	55
12. References.....	63
Appendix 1—Approval Guidelines for the Use of Motorized and Mechanized Equipment or Vehicles for Search and Rescue	65
Appendix 2—Direction Crosswalk.....	67
Environmental Assessment	
1. Introduction.....	74
1.1. Scope of the Wilderness Management Plan.....	74
1.2. Purpose of and Need of the Wilderness Management Plan	74
1.3. Decision to be Made	75
1.4. Public Involvement and Tribal Consultation	76
1.5. Issues.....	76
1.5.1. Issues Not Analyzed in Detail.....	77
2. Alternatives	78
2.1. Alternatives Considered but Eliminated from Detailed Analysis	78
2.2. Management Direction Common to all Alternatives	78
2.2.1. Sawtooth National Recreation Area General Management	79
2.2.2. Eligible Wild and Scenic Rivers	79
2.2.3. Recreation Resources.....	79
2.2.4. Rangeland Resources	79
2.2.5. Forest Service-specific Direction	79
2.3. Management Direction Common to Alternatives A and B	80
2.3.1. Wilderness.....	80
2.3.2. Wildlife Resources	80
2.3.3. Recreation Resources.....	80
2.3.4. Scenic Environment	81
2.3.5. Heritage, Archaeological and Cultural Resources	82
2.3.6. Rangeland Resources	82
2.3.7. Fire Management	82

2.3.8. Lands and Special Uses.....	82
2.3.9. Wilderness Education and Interpretation	82
2.3.10. Search and Rescue	82
2.3.11. Management Zones	83
2.4. Management Direction Common to Alternatives A and C	83
2.4.1. Recreation Resources	83
2.5. Alternative A—Proposed Action	83
2.5.1. Wildlife Resources	83
2.5.2. Recreation Resources	84
2.6. Alternative B—Natural-Focus	84
2.6.1. Wildlife Resources	84
2.6.2. Recreation	84
2.7. Alternative C—Minimal Management	85
2.7.1. Recreation Resources	85
2.7.2. Wilderness Education and Interpretation	85
2.7.3. Management Zones	85
2.7.4. Forest Service-specific Direction	85
2.7.5. Bureau of Land Management-specific Direction	86
2.8. Compliance with Laws, Regulations, Executive Orders, and State Statutes	97
2.8.1. Endangered Species Act.....	97
2.8.2. Tribal Consultation	97
2.8.3. National Historic Preservation Act	97
2.8.4. Migratory Bird Treaty Act	98
2.8.5. Environmental Justice and Socioeconomics	98
2.8.6. Climate Change.....	99
2.8.7. Consistency with Existing FS and BLM Land Use Plans	100
3. Affected Environment & Environmental Consequences	100
3.1. Resources Not Analyzed in Detail	100
3.1.1. Air Quality	101
3.1.2. Aquatic Resources.....	101
3.1.3. Heritage, Archaeological, and Cultural Resources	102
3.1.4. Fire Management	102
3.1.5. Lands Special Uses	103
3.1.6. Scenic Environment	103
3.1.7. Soil	103
3.1.8. Rangeland Resources	104
3.1.9. Minerals and Geologic Resources.....	105
3.2. Past, Present, and Reasonably Foreseeable Future Actions	106
3.3. Wilderness.....	107
3.3.1. Introduction	107
3.3.2. Affected Environment.....	108
3.3.3. Environmental Effects.....	118
3.4. Wildlife	159
3.4.1. Introduction.....	159
3.4.2. Affected Environment.....	160
3.4.3. Environmental Consequences	171
3.4.4. Summary	181
3.5. Botanical Resources, Vegetation, and Nonnative Plants	182
3.5.1. Introduction	182
3.5.2. Resource Indicators and Measures.....	182
3.5.3. Affected Environment.....	182

3.5.4. Environmental Consequences	185
3.5.5. Summary	196
4. Consultation and Coordination	199
5. References	3
Appendix 1—Trails within Closure Areas.....	15
Appendix 2—Forest Plan Amendments.....	17
Management Prescription Category	17
Management Direction.....	17
Management Area 21—Hemingway-Boulders & Cecil D. Andrus-White Clouds Wilderness	18
Management Area Description	20
Management Direction.....	20
Management Area 03—East Fork Salmon River/White Cloud	21
Management Area Description	23
Management Direction.....	23
Management Area 04—Big Wood River.....	24
Management Area Description	26
Management Direction.....	26
See project record for Appendix 3—Response to Comments, HBWC Wilderness Plan.....	26

List of Tables

Table 1. Subwatershed (sub.) conditions within Wilderness planning area.....	14
Table 2. Grazing allotments within the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses	20
Table 3. Forest-wide Goals, Objectives, Standards, and Guidelines, specific to designated wilderness	23
Table 4. Proposed zoning—percentage of each zone and percent visitor use by zone.....	47

List of Figures

Figure 1. Map of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness areas	2
Figure 2. Management Area 21 overlaying the original boundaries of Management Areas 3 and 4.....	11
Figure 3. Management Area 21 showing Wild and Scenic River corridors and motorized access routes surrounding wilderness	12
Figure 4. Map of the Pack Goat Exclusion Area	32
Figure 5. Campfire restrictions within the Hemingway-Boulders Wilderness	35
Figure 6. Campfire restrictions within the Cecil D. Andrus-White Clouds Wilderness	36
Figure 7. Equine stock closure areas.....	38
Figure 8. Hemingway-Boulders Wilderness proposed zoning	48
Figure 9. Cecil D. Andrus-White Clouds Wilderness proposed zoning	49

1. Introduction

The United States Congress established the National Wilderness Preservation System through the Wilderness Act of 1964 (Public Law 88-577; 16 U.S.C. 1131-1136) as a system of federal lands, "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." The Wilderness Act was created to ensure that, "an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States." Thus, wilderness provides a contrast to lands where human activities dominate the landscape.

Only Congress, with Presidential approval, may designate lands as wilderness. Wilderness designation is intended to preserve and protect lands in their natural state. The Wilderness Act defines wilderness, the uses of wilderness, and the activities prohibited within its boundaries. These areas are managed for preserving wilderness character and for the use by and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness.

1.1. Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act

As the designating legislation for the Hemingway-Boulders Wilderness and the Cecil D. Andrus-White Clouds¹ Wilderness, the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act (P.L. 114-46) builds off of the Wilderness Act and includes direction specific to how these two wilderness areas should be administered, "Subject to valid existing rights, each wilderness area shall be administered by the Secretary in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.)....". The Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act further states that each administering agency "shall seek to ensure that the wilderness areas are interpreted for the public as an overall complex linked by the following:

- 1) Common location in the Boulder-White Cloud Mountains; and
- 2) Common identity with the natural and cultural history of the state of Idaho and the Native American and pioneer heritage of the state.

This Act also includes several provisions that are out of scope of this planning effort, including land conveyances, and donations of livestock grazing permits.

2. Wilderness Overview

The two wilderness areas covered in this plan lie in central Idaho. The two areas are separated by a ridgeline between the East Fork of the Salmon River and Germania Creek (Figure 1). Both wildernesses lie predominately within the Sawtooth National Recreation Area (NRA), which was established "...to assure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the recreational values" (Sawtooth NRA Act, P.L. 92-400) found in the area.

¹ Public Law 115-141— Consolidated Appropriations Act, 2018 (3/23/2018) renamed the wilderness.

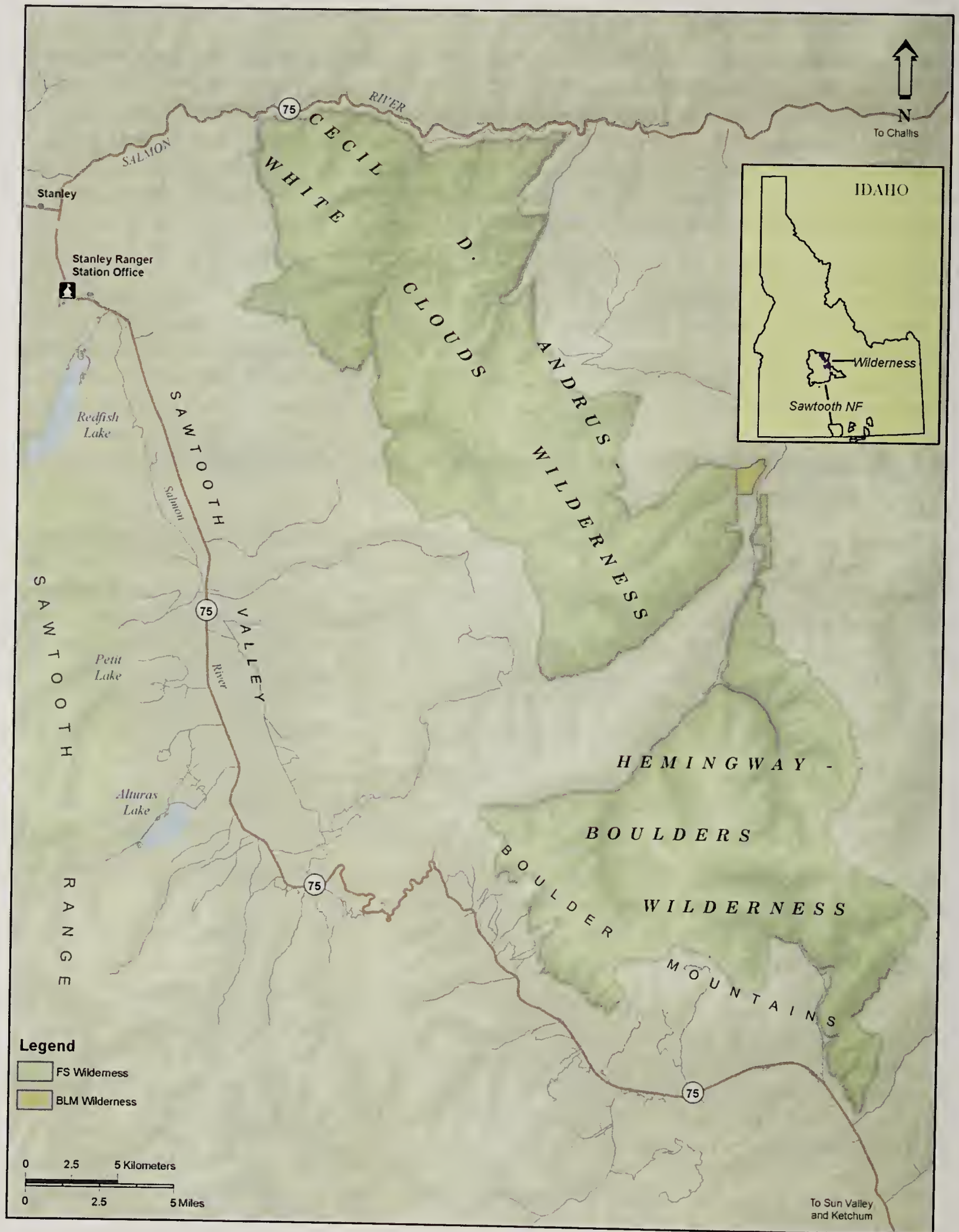


Figure 1. Map of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness areas

2.1. Hemingway-Boulders Wilderness

The Hemingway-Boulders Wilderness encompasses 67,998 acres of National Forest System (NFS) lands within the Sawtooth National Forest (Forest). The area was named for the Boulder Mountains and Ernest Hemingway, the 20th Century novelist, who was a resident in nearby Ketchum, Idaho.

The impressive 4,000-foot rise of the Boulder Front, as seen from Highway 75 just north of Ketchum and Sun Valley, is a defining characteristic of the Boulder Mountains. The complex geologic history of this area has yielded extensive and structurally impressive exposures of Paleozoic carbonate rocks and the intrusive roots of the Challis volcanic field; the most prominent being the pink granitic stock exposed along the Boulder Front.

Lower elevations in the wilderness include steep slopes of sagebrush and a mix of meadow and alpine vegetation. Increasing in elevation, stands of subalpine fir, Douglas-fir, and lodgepole pine tower above visitors. Interspersed between the fir and pine stands are aspen groves with their delicate green leaves in spring and striking yellow tones in fall. In rockier areas, whitebark pine may be found in vegetated pockets.

This habitat diversity, in turn, supports a variety of wildlife, including mountain goats, wolverine, gray wolf, and mountain lion. Elk and mule deer use the area in the summer. The headwaters of the East Fork of the Salmon River and key tributaries of the headwaters of the Big Wood River originate here, providing important spawning and rearing areas for Chinook salmon, steelhead, endemic Wood River Sculpin, native westslope cutthroat trout, and bull trout.

The Boulder Mountains, one of Idaho's highest and wildest ranges, are rich with human history, from early Native Americans to Idaho's prospecting and mining legacy to today, when explorers may still find a challenging adventure. The wilderness offers outstanding recreational opportunities for hikers (on and off trail), horseback riders, skiers, hunters, and anglers. With 12 summits topping 11,000 feet and only 29 miles of trails, opportunities for solitude are outstanding for off-trail exploring and peak climbing. Most recreational use is focused on the small system of primitive trails, including a short accessible trail originating from the North Fork of the Big Wood River. Many of the trails do not lead to the area's alpine lakes; approach to these secluded areas is only gained through the hard work and determination of the recreationist who is willing to explore the challenging terrain.

2.2. Cecil D. Andrus-White Clouds Wilderness

The Cecil D. Andrus-White Clouds Wilderness encompasses 90,769 acres, which is jointly managed by the Forest (90,310 acres), and Bureau of Land Management (BLM), Idaho Falls District, Challis Field Office (459 acres). The landscape of the Cecil D. Andrus-White Clouds Wilderness is said to be some of the most diverse, rugged, and isolated land in central Idaho. Picturesque high-elevation lakes and limestone peaks are the distinctive features of this wilderness.

The bright white limestone first observed by early settlers gave way to the name White Cloud Peaks, which give the wilderness its name. These soaring white peaks rise to meet the clouds and tower over dramatic cirque basins. Volcanic rocks provide productive soils and clear streams, which support the lush flora and fauna found within the wilderness. Here, one may find quiet solitude surrounded by majestic scenery and abundant wildlife.

The topography ranges from 6,000 feet in elevation to 11,815 feet at Castle Peak, the tallest mountain in the Cecil D. Andrus-White Clouds Wilderness, and the entire Sawtooth NRA, this Idaho icon towers above all other peaks in the area. It was here that a proposed open-pit molybdenum mine set off one of Idaho's fiercest conservation battles, leading to the designation of the Sawtooth NRA.

The remarkable character of the White Cloud Peaks is attributed to a complicated assemblage of sedimentary rocks accumulated in a lost Paleozoic sea, Cretaceous granitic intrusions related to the emplacement of the Idaho Batholith, and intrusive and extrusive rocks of the Challis volcanics. The white limestone pyramid of D.O. Lee Peak is one of the most distinguishable summits within the White Clouds. A granitic intrusion, aptly named the White Cloud Stock, forms the foundation rocks of Castle Peak. Thick sequences of the Challis volcanics overlie the Paleozoic and Cretaceous age rocks and are distinctive at lower elevations and within the eastern and southern portions of the range.

The sagebrush steppe ecosystem transition to subalpine forests of aspen and lodgepole pine, which rise to meet alpine talus slopes. Above treeline, rolling fell fields and turf communities support several rare endemic species. Whitebark pine, some of the oldest trees on earth, are an important component in these high-elevation communities.

This wilderness provides habitat that supports species such as mountain goat, bighorn sheep, moose, elk, mule deer, black bear, pronghorn antelope, pika, gray wolf, mountain lion, and the elusive wolverine. Some of these species, such as wolverine, mountain goat, and pika, need the high elevation refugia that this wilderness area is expected to provide in the future as snowpack and snow persistence continue to decrease (Mote et al 2005, Copeland et al. 2010).

The East Fork of the Salmon River, which flows out of this watershed, supports the longest migration route for species of anadromous fish in the lower 48 states. Their headwaters, originating in the Boulder Mountains, foster habitat for westslope cutthroat trout and redband trout. Endangered species, such as bull trout, Chinook, and steelhead, use many of these waterways for spawning and rearing as well as migratory corridors.

The area has been an important part of the West's pioneer and Native American history. Today, world class opportunities for recreational activities are existing throughout the wilderness, including hiking, camping, hunting, fishing, horseback riding, and backcountry skiing during the winter. Because of the diversity of wildlife and its wild character, the Cecil D. Andrus-White Clouds Wilderness is a treasured destination for hunters, fisherman, and wildlife watchers. Along 66 miles of trails, the wilderness offers opportunities for self-reliance and risk; additional opportunities can be found off-trail. Trails lead to secluded basins with high-elevation lakes, while other alpine gems challenge visitors' navigation skills. Opportunities for solitude abound throughout the changing seasons.

2.3. Scope of the Wilderness Management Plan

Planning for wilderness involves translating the Wilderness Act, enabling legislation, agency policy, and regulations into a Wilderness Management Plan (WMP). A WMP provides direction for a specific area and guides the preservation, management, and use of the wilderness to ensure that wilderness is unimpaired for future use and enjoyment as wilderness.

This WMP provides the primary management direction for the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness and was jointly prepared by the Forest Service

and BLM. Each agency has jurisdictional authority for separate portions of the Cecil D. Andrus-White Clouds Wilderness, whereas the Hemingway-Boulders is entirely managed by the Forest Service. Given their proximity, comparable natural resources, similar broad management issues, and administrative jurisdiction, incorporating the administration of these two areas into a single plan is appropriate.

This WMP contains current comprehensive descriptions of the wilderness areas and proposed management direction that relates to specific resources. It defines an acceptable range of desired resource and social conditions by identifying zones. An Environmental Assessment follows the WMP to describe and analyze potential impacts relating to proposed management direction and alternatives.

This WMP does not repeat guidance already contained in existing laws and policies (e.g., the Wilderness Act, Endangered Species Act, or Clean Water Act and existing Federal Regulations). It does not describe the methods, the “how to,” or the schedule of implementing the direction, nor does it describe the day-to-day or operational actions to be carried out in the management of the wildernesses. The rate of implementation and potential management activities depend on the annual budgeting process. A Minimum Requirements Analysis (MRA) and National Environmental Policy Act (NEPA) analysis will be conducted to support management decisions made at the site-specific level. All actions are supplemental to and consistent with wilderness laws, regulations, and policies, which must be further consulted in the event of unforeseen issues.

3. Purpose of and Need for the Wilderness Management Plan

The purpose of a WMP is to provide management direction for the preservation of wilderness character by identifying the conditions and opportunities that will be managed for within wilderness, creating specific standards and guidelines for managing wilderness resources and activities. The Wilderness Act (Section 4) requires that “... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area.” Although wilderness character is a complex idea and is not explicitly defined in the Wilderness Act, the qualities of wilderness character are described as follows (adapted from *Keeping it Wild 2* [Landres et al. 2015]):

- **Untrammeled**—Area is unhindered and free from intentional actions of modern human control or manipulation.
- **Natural**—Area appears to have been primarily affected by the forces of nature and are substantially free from the effects of modern civilization.
- **Undeveloped**—Area is essentially without permanent improvements or the sights and sounds of modern human occupation.
- **Outstanding opportunities for solitude or a primitive and unconfined type of recreation**—Area provides outstanding opportunities for recreation in an environment that is relatively free from the encumbrances of modern society and for the experience of the benefits and inspiration derived from self-reliance, self-discovery, physical and mental challenge, and freedom from societal obligations.

- **Other Features of Value**—Area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. Though not required of any wilderness, where they are present, they are part of that area's wilderness character and must be protected as rigorously as any of the other four required qualities.

The need for the Proposed Action stems from the signing of Public Law 114-46 which changed the management direction of these areas. For the Forest Service portions of the two wilderness areas, the change was from recommended wilderness to designated wilderness. The BLM portion of the Cecil D. Andrus-White Clouds Wilderness was previously managed as the Boulder Creek Wilderness Study Area (WSA).

Additionally, as directed by the Sawtooth National Recreation Area and Jerry Peak Wilderness Act, "Not later than 3 years after the date of enactment of this Act, the Secretary of Agriculture and the Secretary of Interior shall collaboratively develop wilderness management plans for the wilderness areas."

4. Consistency with Forest Service and Bureau of Land Management Use Plans

This WMP conforms with the programmatic direction of the Sawtooth National Forest Land and Resource Management Plan, as amended (Forest Plan; USDA Forest Service 2012) and is consistent with the BLM Challis Resource Area Record of Decision and Resource Management Plan (RMP; BLM 1999). This WMP complies with Forest Service planning regulations, will meet Forest-wide direction, and will amend management area direction. This WMP direction applies to the BLM portion of the Cecil D. Andrus-White Clouds Wilderness.

4.1. Existing Management Direction

Sawtooth Forest Plan

This section provides an overview of the management of the area—as established in the 2012 Forest Plan—that now includes designated wilderness. It is this direction that may be changed by approval of this plan, through a Forest Plan amendment.

Existing Forest-wide Direction

The Forest Plan includes these areas as recommended wilderness and provides the following direction (USDA Forest Service 2012):

Manage recommended wilderness to protect wilderness values as defined in the Wilderness Act. Activities permitted in recommended wilderness do not compromise wilderness values nor reduce the area's potential for wilderness designation. Non-conforming uses in recommended wilderness should not be promoted (WRGO02).

Additionally, the following standards within the Forest Plan apply to recommended wilderness areas (Management Prescription Category [MPC] 1.2) (USDA Forest Service 2012):

- Management actions, including wildland fire use and prescribed fire, must be designed and implemented in a manner that maintains wilderness values, as defined in the Wilderness Act.
- Mechanical vegetation treatments, including salvage harvest, are prohibited.

- No new motorized or mechanized uses will be allowed, except where these uses must be allowed in response to reserved or outstanding rights, statute or treaty.
- Existing motorized or mechanical uses are allowed only if they do not lead to long term adverse changes in wilderness values.

Existing Management Area Direction

In 2003, the Forest Plan established two management areas that included the Boulder/White Cloud recommended wilderness areas: the East Fork Salmon River/White Clouds Management Area (03) and the Big Wood River Management Area (04). These management areas included direction for these recommended wildernesses. Specifically, trails were not to be constructed within trail-less areas of the Boulder/White Cloud recommended wilderness area unless the trails were determined to be necessary to prevent resource damage.

The following prohibitions were also applied to these areas (and a Special Order enforcing them was issued) (Forest Plan Standards 0305 and 0405 [USDA Forest Service 2012]):

- Having greater than 20 persons in a group
- Being in the area with a combined number of recreational stock in excess of 25 animals
- Shortcutting trail switchbacks on foot or with recreational stock
- Building, maintaining, attending, or using campfires within 200 yards of the following lakes: Cirque, Cove, Sapphire, Sheep, Slide, Tin Cup, Gunsight, Four Lakes Basin, Scree, Shallow, Castle, and Chamberlain 9,849'
- Tethering recreational stock within 100 feet of springs, lakes, or streams
- Tying recreational stock to live trees for longer than one hour

Challis Resource Management Plan

The Challis RMP includes direction for WSAs released from wilderness consideration and limited direction regarding management of designated wilderness, including a plan of operations for minerals activities (BLM 1999, p. 88), the withdrawal of the area from mineral entry and general land laws (BLM 1999, p. 89), and incorporation of Minimum Impact Suppression Tactics Guidelines (BLM 1999, p.104).

5. Issues Resolved by Policy

The listed topics below have been addressed by law or agency policy and not discussed further in this WMP, unless noted.

Wilderness Designation—The wilderness areas were designated by Congress through the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act. This WMP does not consider releasing the wilderness designation. The boundaries of the wilderness were set through passage of the Act and are not open to review through this planning process (see 36 CFR Part 261.18, National Forest Wilderness, and 43 CFR Part 6300, Management of Designated Wilderness Areas). The direction established in the WMP would apply within the final surveyed boundaries.

Hunting, Fishing, and Trapping—Hunting, fishing, and trapping regulations are written and enforced by the State of Idaho. Section 1029(g) of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act reiterates this provision, “Nothing in this title affects the jurisdiction of the State of Idaho with respect to the management of fish and wildlife on public land in the State, including the regulation of hunting, fishing, and trapping within the wilderness areas.”

Per wilderness law and policy, access associated with hunting, fishing, and trapping is limited to non-motorized and non-mechanized means and is allowable as long as the trapper does not commercially sell the fur, hides, or other parts of the trapped animal.

Livestock Grazing and Allotment Management Plans—Livestock grazing, where established prior to August 7, 2015, shall be administered in accordance with Section 4(d)(4) of the Wilderness Act; Section 102(e) of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act; the grazing guidelines in House Report 96-617; and Appendix A of House Report 101-405. The wilderness designation may affect some of the methods used to maintain range improvements; these effects are discussed in this WMP.

The wilderness designation does not affect grazing preference, nor does it preclude the development of Allotment Management Plans. These items are administered according to the regulations in 36 CFR 222 and 43 CFR 4100. In accordance with existing Forest Service and BLM policy, periodic interdisciplinary allotment evaluations assess grazing use by domestic cattle, sheep, and other animals on vegetation and a determination of ecological health is made. Waiver and donation of grazing permits and leases, as identified in the designating legislation, is considered outside of this planning process.

Special Uses—Section 4(d)(6) of the Wilderness Act states that commercial services, such as outfitter and guides and/or pack stock rentals, are allowed “to the extent necessary for activities which are proper for realizing the recreational or other purposes of the areas.” This recognition is reiterated in the enabling legislation, Section 102(f). Commercial services are further guided by the Federal Lands Recreation Enhancement Act and agency-specific policy and guidance (FSM 2709.14, BLM Manual 2930, H-2930-1) in addition to direction specific to wilderness.

6. Management Area 21

6.1. Management Area Description

This WMP amends the Forest Plan (USDA Forest Service 2012) to include a new management area (Management Area [MA] 21), which encompasses the entirety of the two wildernesses, and to modify the portions of MA 3 and MA 4 to exclude the lands now designated as wilderness (see Figure 2 below). The Challis RMP is not amended or modified per this WMP.

The subsequent portions of this document are structured similarly to the Forest Plan, starting with a narrative section describing the management area by resource, followed by specific management direction for MA 21. The narrative section provides an overview of current conditions and issues. Within this section, the terms management area and wilderness areas are used interchangeably.

MA 21, includes only the NFS portions of the two wildernesses; however, this WMP applies to the entirety of the two wildernesses, and the area description below includes the BLM-managed

portion of the Cecil D. Andrus-White Clouds Wilderness. This section references the wildernesses, of which 99% is within MA 21.

General Location and Description

MA 21 is composed of NFS lands administered by the Sawtooth NRA and Ketchum Ranger District of the Forest. MA 21 is located within the northeastern portion of the Forest.

The Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness lie in Custer and Blaine counties. The wildernesses are bordered on the south and west by the Sawtooth NRA and Sawtooth National Forest, on the north by the Salmon-Challis Forest, and on the east by the Sawtooth National Forest, Salmon-Challis Forest, and BLM.

In total, the two wildernesses encompass 158,767 acres: 67,998 acres in the Hemingway-Boulders Wilderness and 90,769 acres in the Cecil D. Andrus-White Clouds Wilderness. Approximately 99.9% of the area is administered by the Forest Service, with less than 0.1% administered by the BLM. The primary uses and activities in the area have been recreation, livestock grazing, and historic mining.

6.2. Wilderness Character

As part of the 1987 Forest Planning process and the 2003 Forest Plan revision process, portions of the Boulder White Cloud Inventoried Roadless areas were recommended as wilderness because of their high natural integrity and minimal impact by humans. These areas generally include the Cecil D. Andrus-White Clouds and Hemingway-Boulders Wildernesses which have consistently shown wilderness characteristics suitable for inclusion in the National Wilderness Preservation System as defined by the Wilderness Act. Similarly, the BLM portion of the Cecil D. Andrus-White Clouds Wilderness was previously managed as the Boulder Creek WSA to preserve wilderness characteristics.

The Wilderness Act defines wilderness and mandates that the primary management direction is to preserve wilderness character. The definition of wilderness is found in Section 2(c) of the Wilderness Act, and the qualities of wilderness character are commonly described as untrammeled; natural; undeveloped; outstanding opportunities for solitude or a primitive unconfined form of recreation; and other features of scientific, educational, scenic, or historical value.

Untrammeled—Portions of the Cecil D. Andrus-White Clouds and Hemingway-Boulders Wilderness areas have had some degree of human control or manipulation of the biophysical environment. Past activities, which have affected the untrammeled quality of the wilderness, include prescribed burning, historic mining, and grazing. More recently, trammeling actions include management of wildland fire and invasive species, fish stocking, and livestock grazing.

Natural—The natural quality of these wilderness areas is mostly intact. The varying elevations in the area provide important habitat for a wide array of fish and wildlife species. Vegetation ranges from mountain sagebrush to whitebark pine ecosystems. Some changes to the native vegetation composition have occurred in portions of the wilderness, including the introduction of non-native species; fire exclusion; and livestock grazing impacts. Additionally, fish have been stocked in many of the high mountain lakes, thus altering the natural composition of the area.

Undeveloped—For the most part, these areas show few signs of human habitation and permanent improvements. Developments—such as range fences, developed springs, troughs, and abandoned

or unauthorized vehicle routes; and mining debris—are scattered across the wildernesses. Generally, these developments are few and far between considering the vastness of the landscape. Emergency administrative authorizations for motorized/mechanized use occur for fire suppression and search and rescue operations. Unauthorized motorized and mechanized recreational uses occur along the boundaries and intrude into wilderness. Existing motorized roads and trails surrounding the wilderness areas, including cherry-stemmed routes, make administration challenging with additional opportunities for illegal motorized or mechanized incursions into wilderness.

Outstanding opportunities for solitude or a primitive and unconfined recreation—These wilderness areas provide outstanding opportunities for solitude and primitive, unconfined recreation. The varying topography of the wildernesses and relatively few trails provide excellent opportunities for solitude. In addition, a range of recreational experiences can be found within the wildernesses, including short day hikes, plentiful backpacking options, multi-day pack trips, or off-trail scrambles allowing for exploration and discovery. Visitor use restrictions have been in place within these two areas since 1996, reducing the perception of unconfined recreation. Also, within the wildernesses are recreation-related facilities, such as bridges, trails, tent base logs, meat poles, and stock tie facilities.

Other Features of Value—The Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses provide quality air and water, spectacular scenery, and unique geologic features. These wilderness areas are important for providing clean water to downstream imperiled fish species.

Segments of the following ten streams that flow through wilderness are eligible for Wild and Scenic River designation: Warm Springs Creek, Boulder Chain Lakes Creek, Little Boulder Creek, Germania Creek, West Fork East Fork Salmon River, East Fork Salmon River, South Fork East Fork Salmon River, West Pass Creek, West Fork North Fork Big Wood River, and North Fork Big Wood River (see Figure 3).

Night sky visibility across the two wildernesses is of very high quality and contributes to the wilderness character of each wilderness.

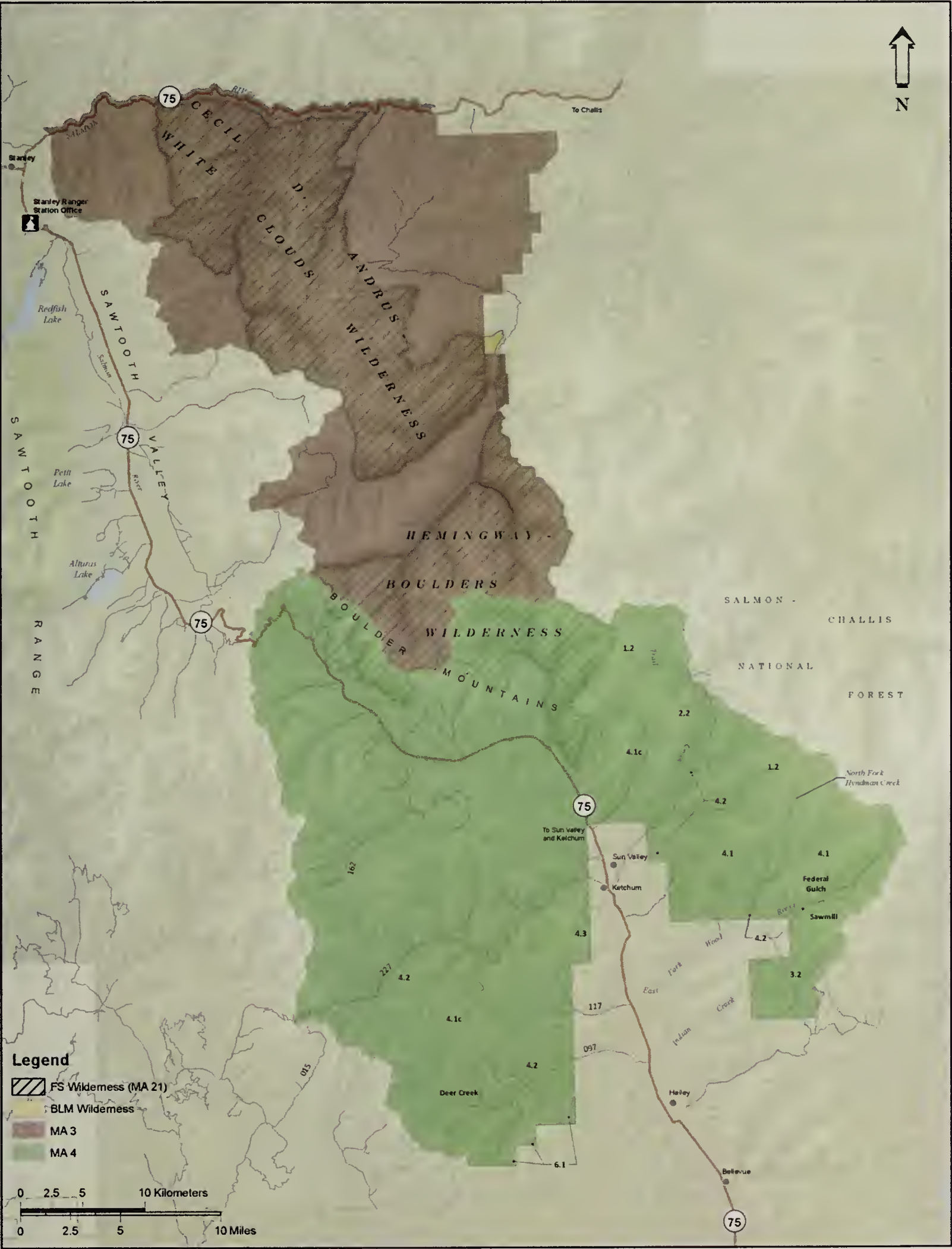


Figure 2. Management Area 21 overlaying the original boundaries of Management Areas 3 and 4



Figure 3. Management Area 21 showing Wild and Scenic River corridors and motorized access routes surrounding wilderness

6.3. Access

Vehicle access to the boundary of the Cecil D. Andrus-White Clouds Wilderness is by NFS road 209 (Fourth of July Creek) from State Highway 75, NFS road 667 (Livingston Mill), and the East Fork Road. These roads are maintained and gravel surfaced. Other access routes include NFS road 197 up Pole Creek to Germania Creek, and NFS road 120, which is an extension of the East Fork Salmon River Road. A system of trails also provides access to portions of the wilderness areas.

Most vehicle access to the boundary of the Hemingway-Boulders Wilderness is via NFS road 146 (North Fork Big Wood River) from State Highway 75 and NFS road 120, an extension of the East Fork Road. These roads are well maintained and gravel surfaced. West Pass Creek Road (NFS road 063) provides more primitive access from the north to the wilderness. Several short roads also exist off of State Highway 75 that end at the wilderness boundary and are some of the primary access points for winter recreation.

6.4. Air Quality

These wildernesses lie within Montana/Idaho Airsheds ID-17 in Custer and Blaine counties. The Idaho Department of Environmental Quality (IDEQ) regulates air quality in the state and the Forest Service participates in coordinated smoke management as a member of the Montana/Idaho State Airshed Group for wildland fire. The intent of the Montana/Idaho Airshed Group smoke management program is to minimize or prevent smoke impacts while using fire to accomplish land management objectives.

The Cecil D. Andrus-White Clouds and Hemingway-Boulders Wildernesses are located within a state designated Class II airshed regulated by the Environmental Protection Agency (EPA) as required by the federal Clean Air Act. The wilderness areas are bracketed by the nearby Sawtooth Wilderness, Craters of the Moon National Monument, and the Selway-Bitterroot Wilderness, all federal Class I areas. The highest level of protection from air pollution impacts is provided to these Class I areas, which are monitored through visibility monitoring by Interagency Monitoring of Protected Visual Environments (IMPROVE) sites. These three IMPROVE sites are reasonable approximations of visibility conditions in west-central Idaho, including the Cecil D. Andrus-White Clouds and Hemingway-Boulders Wilderness areas and have documented good visibility with periodic reductions during periods of active wildfire (UC Davis IMPROVE Report 2014).

In addition to information provided by the nearby IMPROVE monitors, lichen monitoring in the Sawtooth Wilderness provides managers with information regarding potential deposition impacts and current conditions affecting wilderness resources that may be affected by air pollution (St. Clair 2013). Late winter snowpack samples provide a very useful metric of chemical deposition from all transport sources (short and long range) through late fall and winter. Snow chemistry is cooperatively monitored with the U.S. Geological Survey Water Resource Division in Colorado at sites at Banner and Galena Summits. Analysis of snow collected at these sites shows generally low concentrations of contaminants (Ingersoll 2016). Another key component of the nearby Sawtooth and Frank Church-River of No Return Wilderness air quality monitoring has been lake chemistry sampling. Lake chemical records can indicate changes in a lake's composition, which is very diagnostic of atmospheric chemistry in sensitive lakes (Mebane and Gurrier 2006). These data are reflective of conditions in less sensitive Challis volcanics bedrock as well as the more sensitive granitic bedrock of the Idaho Batholith found within the wildernesses.

6.5. Soil, Water, Riparian, and Aquatic Resources

Elevations range from 5,943 feet on the Salmon River to 11,815 feet atop Castle Peak. Three major mountainous ranges occur within the wildernesses: Boulder Mountains, East Fork Salmon River Mountains, and White Cloud Peaks. These mountains are derived from a range of geologic parent material in which glaciation and fluvial processes have resulted in a variety of landforms. Slopes range from near vertical to 45% in the glaciated highlands and from 0% to 35% in the glacial and fluvial outwash areas. The surface geology is a mix of Idaho Batholith granitics, Challis volcanics, and remnant Paleozoic metasedimentary rocks. Soils generally have moderate-to-high surface erosion potential, and productivity is low to moderate. Subwatershed vulnerability ratings range from low to high, with the majority being low (Table 1). Geomorphic Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with the majority being moderate (Table 1).

Localized impacts are occurring, primarily from livestock grazing, dispersed recreation, and past mining activities. These impacts include soil instability, compaction, and reduced productivity, as well as accelerated sediment and stream channel modification, which can be individually severe.

The wildernesses are located within portions of five watersheds in the Upper Salmon River subbasin and three watersheds in the Big Wood River subbasin. Streams in the Basin-Casino, Warm Spring Creek, and Squaw-Slate Watersheds drain directly north into the Salmon River. Streams in the Big Lake-Boulder and Upper East Fork Salmon River Watersheds drain into the East Fork Salmon River, which flows north into the Salmon River. The three southern watersheds drain into the Big Wood River, which flows south towards the Snake River. The major streams in the area are the East Fork Salmon River, Warm Springs Creek, Slate Creek, Big Boulder Creek, Little Boulder Creek, Germania Creek, West Pass Creek, and North Fork of the Big Wood River. Many alpine lakes occur in the area, including Big Boulder Lakes, Boulder Chain Lakes, Chamberlain Basin Lakes, and Amber Lakes. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with the majority being moderate (Table 1).

Localized accelerated sediment impacts have occurred from dispersed recreation, livestock grazing, and historic mining. Three of the 18 subwatersheds in this area were listed in 2012 as having impaired water bodies under Section 303(d) of the Clean Water Act. These subwatersheds are Slate Creek, Wickiup-Sheep, and Harden-Rough Creek. The pollutant of concern was sedimentation/siltation for the Harden-Rough waterbodies as well as not meeting criteria for combined habitat/bio-assessments (cold water aquatic life and salmonid spawning) for the Slate and Wickiup-Sheep waterbodies. No Total Maximum Daily Load (TMDL)-assigned subwatersheds are located within the wildernesses.

No public water system subwatersheds occur in the area.

Table 1. Subwatershed (sub.) conditions within Wilderness planning area

Subwatershed Vulnerability (No. of subwatersheds)			Geomorphic Integrity (No of subwatersheds)			Water Quality Integrity (No of subwatersheds)			No. 303(d) Sub.	No. of subwatersheds with Total Maximum Daily Loads	No. of Public Water System Subs
High	Mod	Low	High	Mod	Low	High	Mod	Low			
3	5	10	1	12	5	0	17	1	3	0	0

Within the Salmon River subbasin, the lower segments of several of the wildernesses' larger streams support spawning and rearing habitat for Chinook salmon and steelhead. Bull trout occupy these same segments and extend upstream towards the headwaters. All three species are listed and protected under the ESA, and their critical habitat has been designated. Within the area, critical habitat for Chinook salmon and steelhead is located primarily within Warm Springs Creek and the East Fork Salmon River and its tributaries. Bull trout critical habitat occurs in these same segments but also extends upstream to headwater reaches. Migratory and resident bull trout use Warm Springs Creek, the East Fork Salmon River, and their tributaries for spawning and rearing. The East Fork Salmon River and Warm Springs Creek, and their tributaries, also provide spawning, rearing, and migratory habitat for westslope cutthroat trout—a Region 4 sensitive species. Wood River Sculpin occur within the Big Wood Basin and southern portions of the Hemingway-Boulders Wilderness. Wood River Sculpin are a species endemic to the Big Wood drainage and are listed as a Region 4 sensitive species.

Most of the high alpine lakes within these wildernesses are hatchery-stocked recreational fisheries, with cutthroat trout as well as non-native eastern brook trout, golden trout, rainbow trout, and arctic grayling. Impacts to native aquatic species and habitats can occur from the introduced stocked species and increased recreational use of these habitats. Aquatic habitat around these lakes is functioning at risk in some localized areas due to past and present impacts from trail alignments, dispersed recreation, livestock grazing, and historic mining. Native fish and amphibian populations are at risk from the presence of non-native fish species and the habitat impacts described above.

The Wickiup-Sheep, Big Boulder Creek, Upper East Fork Salmon, Germania Creek, Slate Creek, Prospect-Robinson Bar, Swimm-Martin, Upper Warm Springs, North Fork Big Wood-Murdock, and Upper North Fork Big Wood River subwatersheds have been identified as important to maintaining or restoring strong populations of native species and the recovery of listed fish species.

6.6. Vegetation

An estimated 9% of the two wildernesses is non-forested, or covered by grassland, shrubland, meadows, rock, or water. Much of this percentage is comprised of the Mountain Big Sagebrush, Montane Shrub, and Alpine/Dry Meadows vegetation groups. The main forested vegetation groups are High Elevation Subalpine Fir (32%), Warm Dry Subalpine Fir (20%), Cool Dry Douglas-Fir (10%), and Persistent Lodgepole Pine (10%). Aspen is a minor but important component in the Warm Dry Subalpine Fir and Cool Dry Douglas-Fir groups.

The Montane Shrub group is near properly functioning condition, although older age classes dominate structure due to factors including, but not limited to, livestock grazing impacts, non-native invasive species, and conifer encroachment. The Mountain Big Sagebrush group is functioning at risk in localized areas due to factors including, but not limited to, livestock grazing impacts, non-native invasive plant species, and conifer encroachment.

The Alpine and Dry Meadows groups are functioning at risk in some areas because of historic grazing impacts, non-native invasive plant species, and conifer encroachment. The Grass Montane and Alpine Sparsely Vegetated group is near properly function condition, although soil loss and compaction from livestock grazing and recreational impacts exist in some areas.

The High Elevation Subalpine Fir vegetation group is functioning at risk where fire exclusion has allowed shade-tolerant subalpine fir to increase in density to the detriment of the whitebark

pine component. Whitebark pine is an important component of the High Elevation Subalpine Fir group and is being affected by climate variations, insects, disease, and altered fire regimes.

The Warm Dry Subalpine Fir, Cool Dry Douglas-Fir, and Persistent Lodgepole Pine groups are functioning at risk where fire exclusion has resulted in older, more decadent stands with more climax species and less early seral species, particularly aspen.

Aspen is present in pure stands and mixed with Douglas-fir and lodgepole pine. Many stands are dying out because of environmental reasons, and localized impacts are occurring from past management practices including, but not limited to, conifer encroachment, fire exclusion, and livestock grazing. Fire hazard is increasing in Douglas-fir and lodgepole stands due to factors including, but not limited to, increasing mortality from Douglas-fir beetle and mountain pine beetle outbreaks and resulting increased fuel loads.

Riparian vegetation is functioning at risk in localized areas due to vegetation loss and stream and floodplain alterations from factors including, but not limited to, dispersed recreational sites and grazing. Campfires and user-developed routes can impact sensitive, high elevations lakes; riparian areas; and vegetation (e.g., alpine plant communities and whitebark pine). Dead and down wood levels are low in areas with dispersed camping because of fuelwood gathering. Native mesic/hydric plant communities have transitioned to species found in drier habitats in localized areas due to factors including, but not limited to, livestock grazing. Fire exclusion has had the cumulative effect of reducing wet meadows.

6.7. Botanical Resources

Region 4 sensitive species—White Cloud milkvetch, whitebark pine, slender moonwort, and Marsh's bluegrass—are found in the wildernesses. Forest Watch plant species in the wildernesses include northern sagewort, wedge-leaf saxifrage, Mt. Shasta sedge, and pointed draba/rockcress draba. No federally listed or proposed plant species are known to occur in the area, except whitebark pine, a candidate species, which occurs at high elevations throughout the wildernesses.

6.8. Non-native Plants

Spotted knapweed, diffuse knapweed, scotch and Canada thistle, yellow toadflax, black henbane, and dalmatian toadflax occur in the wildernesses or adjacent to their boundaries. The main species of concern are Dalmatian and yellow toadflax, found in small, scattered populations, and spotted knapweed, found along travel corridors. Areas adjacent to trails, roads, and high-use areas are highly susceptible to invasion by and spread of non-native plant species.

6.9. Wildlife Resources

Shrublands are used by pronghorn antelope, elk, mule deer, and moose in spring, fall, and winter and greater sage-grouse during late summer. Area forests provide habitat for the ESA-listed Canada lynx and several Region 4 sensitive species including northern goshawk, flammulated owl, great gray owl, boreal owl, three-toed woodpecker, Townsend's big-eared bat, gray wolf, and fisher. Gray wolves were re-introduced into central Idaho in 1995 and 1996 and a several packs have used portions of the wilderness areas since then.

The area also provides habitat for several migratory bird species and pileated woodpecker, a management indicator species (MIS). High-elevation alpine areas provide habitat for bighorn sheep in the spring and summer and mountain goats year-round. The wildernesses also provide habitat for wolverine, which is a Region 4 sensitive species and proposed for ESA-listing. Much

of the area provides nesting and foraging habitat for migratory land birds and general habitat for wide-ranging mammals such as bear and mountain lion.

Terrestrial habitat is functioning at risk in some areas due primarily to human-caused disturbance; grazing; and long-term fire exclusion, which has altered some habitats. Recreational uses directly disturb species such as bighorn sheep and wolverine (during the reproductive denning period) and degrade habitat from the use of campsites and campfires and the creation of unauthorized user-developed routes. The risk of disease transmission between pack goats and bighorn sheep is also a concern. Introduced spotted knapweed and other non-native species are affecting sagebrush communities and other habitats. Current livestock and recreational stock grazing in some areas is preventing localized areas to recover from grazing impacts.

Idaho's State Wildlife Action Plan (IDFG 2017) provides a framework for identifying and conserving Species of Greatest Conservation Need (SGCN) and the habitats upon which they depend. The Forest participated in working groups that assisted the State in identifying conservation actions important for SGCN. The State Wildlife Action Plan is organized by ecological sections, and the wildernesses fall mostly within the Challis Volcanics Section with a small portion of the Cecil D. Andrus-White Clouds Wilderness in the Idaho Batholith Section. Within each section, target habitats and target species were identified for conservation actions. The wildernesses contain nine target habitats (Dry Lower Montane-Foothill Forest, Subalpine-High Montane Conifer Forest, Aspen Forest & Woodland, Lower Montane-Foothill Grassland & Shrubland, Sagebrush Steppe, Alpine & High Montane Scrub, Grassland & Barrens, Riverine-Riparian Forest & Shrubland, Springs & Groundwater-Dependent Wetlands, and Lakes, Ponds & Reservoirs) and five target taxa (Bat assemblage, Wolverine, Bighorn Sheep, Pollinators, and Mountain Goat). In addition to the Statewide Wildlife Action Plan, the Idaho Department of Fish and Game (IDFG) has developed various species management plans, which help guide management of wildlife in the wildernesses.

The Memorandum of Understanding (MOU) between the IDFG and the Forest Service (2010-MU-11062754-027) identifies that a separate MOU for managing fish and wildlife in wilderness areas in Idaho is needed. Until an Idaho-specific wilderness MOU is developed, the guidelines within the document, *Policies and Guidelines for Fish and Wildlife Management in National Forest and BLM Wilderness* (USDA Forest Service, BLM, and AFWA 2006) will serve as a framework for enhanced cooperation between State fish and wildlife agencies, the Forest Service, and the BLM for fish and wildlife management in wilderness. The guidelines in this document will be applied for managing activities including (but not limited to) use of motorized equipment, application of pesticides, fish and wildlife research and management surveys, facility development and habitat alteration, conservation of threatened and endangered species, population sampling, fish stocking, wildlife damage control, and visitor management to conserve wilderness wildlife resources.

6.10. Recreation Resources

The Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulder Wilderness provide outstanding opportunities for solitude and primitive recreation. A variety of dispersed recreational activities occur throughout the area, including hiking, backpacking, stock packing, hunting, fishing, horseback riding, backcountry skiing, wildlife viewing, photography, mountaineering, and other pursuits. These wildernesses are in Idaho Fish and Game Management Units 36, 36A, and 48.

Approximately 95 miles of trail occur within the Cecil D. Andrus-White Clouds and Hemingway-Boulders Wilderness areas, ranging from a minimally developed Class 1 trail to a more developed Class 3 trail, providing a variety of wilderness trail opportunities (for trail standards see USDA Forest Service 2008). Additionally, both wilderness areas offer extensive opportunities for off-trail exploration that supports opportunities for challenge, risk, and solitude.

Due to landscape and topographic features, most recreational use is funneled toward lake basins in sensitive, high-elevation zones. As a result, certain areas receive relatively high and concentrated recreational use; predominantly at Boorn Lakes, Chamberlain Lakes, Boulder Chain Lakes, and Big Boulder basin in the Cecil D. Andrus-White Clouds Wilderness. This use has resulted in soil compaction, fire-scarred rock, loss of and damage to vegetation and ground cover, and increased erosion.

Some campsites or stock tie areas are denuded of dead and down wood, and living trees have been damaged by recreationists. Whitebark pine is used for fuelwood and used by visitors to build campsite structures. Campfire rings, and the associated scars and trash, appear throughout the area, including at low use and sensitive high-alpine areas.

The current group size limit of 20 persons and 25 head of stock (Special Order 0414-04-034) is greater than most campsites can accommodate without unacceptable impacts to resources; impacts include unauthorized user-developed routes, campsite expansion, and sanitation concerns, particularly within sensitive environments such as the high alpine lakes. Trailhead registration and wilderness ranger contacts indicate that some groups exceed the group size limit, particularly at popular destinations. Research shows that large groups affect the solitude of other users.

Recreational stock use, primarily horses and mules, is typically concentrated on developed trails. Pack goats and llamas are infrequent users of these areas. Current regulations limit recreational stock to 25 head in one group (Special Order 0414-04-034). Even with these limitations, recreational stock use and recreational grazing at high-elevation lakes is impacting soil; vegetation, including whitebark pine; riparian processes; and aquatic biota. Some conflicts between general recreation and recreational stock uses may occur due to stock waste, vegetation damage, and trail encounters.

Few recreational developments are found in the wildernesses. Trail structures are typically limited to puncheons and turnpikes made of native materials; however, one structural timber bridge was installed as part of an accessible trail development on Murdock Creek Trail in the Hemingway-Boulders Wilderness prior to designation. In an effort to concentrate impacts caused by recreational stock, nine stock tie areas are identified in high-use portions of the Cecil D. Andrus-White Clouds Wilderness. These sites are provided with either hitching posts or cable highlines. Signs are placed at trail junctions and to identify stock tie areas. Campsites are undesignated, primitive sites with no developments.

No motorized trails or roads were closed because of wilderness designation. However, all trails were closed to mechanized use, including some previously used by mountain bikers. Some use continues illegally, primarily on Castle Divide (NFS trail 047) and Antz Basin/Warm Springs (NFS trail 671).

In some places, roads and motorized trails define the boundary of the Cecil D. Andrus-White Clouds and Hemingway-Boulders Wilderness areas; notably Rough Creek (NFS trail 647), Garland Lakes/Martin Creek (NFS trails 646 and 648), Germania Creek (NFS trail 111), Frog

Lake Loop (NFS trails 047 and 682), South Fork of the East Fork of the Salmon River (NFS trail 112), and North Fork Wood River road. Slate Creek and West Pass Creek roads and Warm Springs Trail “cherry-stem” into the wilderness. Pre-existing vehicle routes accessing dispersed campsites and unauthorized, user-developed routes intrude on the wilderness boundaries and degrade wilderness character. Some areas of concern include the North Fork of the Big Wood River, Upper East Fork of the Salmon River, Lower Warm Springs, and Slate Creek. During the winter, snowmobilers are drawn to high-elevation heavy snowpack and boundaries are difficult to sign. The sights and sounds of motorized and mechanized uses can penetrate the wilderness and affect a visitor’s experience. These factors present a range of management challenges, including the potential for motorized or mechanized incursions.

Permitted livestock grazing may impact recreational experiences in areas where active allotments exist. Impacts from livestock grazing include livestock waste, vegetation trampling and trails, negative interactions with guard dogs, and the presence of developments such as fencing and water troughs.

Section 4(d)(6) of the Wilderness Act states that commercial services, such as outfitter and guides and/or pack stock rentals, may be performed to “the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.” This recognition is reiterated in the enabling legislation, Section 102(f). The agencies acknowledge the MOU between Regions 1, 4, and 6 of the Forest Service, the Idaho State BLM office, and the Idaho Outfitter and Guide Licensing Board (IOGLB). Agencies will work with the IOGLB to manage commercial services within the wilderness, such as when undertaking the needs assessment through the land use plans.

Traveling by horseback in these lands, now designated as wilderness, is a traditional use with a long history. Outfitters and guides provide services to support recreational activities of wilderness visitors. Outfitters also assist agencies with trail maintenance, campsite maintenance, and education.

Six outfitters hold priority use permits for operations in the Cecil D. Andrus-White Clouds Wilderness, five are administered by the Sawtooth NRA and one is administered by the Challis Field Office. Of these six outfitters, three also operate in the Hemingway-Boulders Wilderness. These outfitters offer guided hiking, mountain climbing, skiing, horse packing, hunting, and fishing opportunities. Two assigned outfitter campsites are located in the Cecil D. Andrus-White Clouds Wilderness and one is located in the Hemingway-Boulders Wilderness. These sites have some development, including tent and stock structures. Temporary use outfitting and guiding occurs in these areas as well. The type and amount of temporary outfitter and guide use varies from year to year.

Management presence typically includes two to four wilderness rangers, a Wildlands Education Coordinator, and two trail maintenance crews that split their time between the Sawtooth, Cecil D. Andrus-White Clouds, and Hemingway-Boulders Wilderness areas. Several non-profit organizations lead volunteer trail maintenance and reconstruction projects. Volunteers and interns are also used to augment ranger patrols and support the Wildlands Education Program, providing information and education to users prior to their wilderness visit or during their backcountry visit.

6.11. Cultural Resources

Cultural themes in this area are represented by prehistoric occupation, Euro-American exploration, trapping, mining, ranching, and recreation. Native American tribes continue to use the tributaries of the Salmon River and other natural resources in this region, and certain peaks within the new wildernesses are known to be sacred for these tribes. Historic activities beginning in the 1870s, such as mining and ranching, have left related installations or structures that may be considered for historic value. The high-elevation lakes within the wildernesses have been recreation destinations since the Forest Service was established in 1906. Current impacts to cultural resources include grazing, threats from fire suppression, vandalism, and illegal collection of cultural artifacts.

6.12. Rangeland Resources

This area contains part or all of three cattle allotments, two sheep allotments, and the Ketchum-Stanley sheep driveway (Table 2).

Table 2. Grazing allotments within the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses

Allotment	Acres	Wilderness	Wilderness Acres	Percent of Wilderness in Allotment	Percent of Allotment in Wilderness
North Fork/Boulder Creek ^a	34,678	Hemingway-Boulders	13,631	20.0%	39.3%
Upper East Fork ^{a, d}	58,615	Hemingway-Boulders	36,593	53.8%	62.4%
Lower East Fork ^a	73,076	Hemingway-Boulders	98	0.1%	0.1%
Lower East Fork ^a	73,076	Cecil D. Andrus-White Clouds	15,629	17.2%	21.4%
Warm Springs Meadow ^{a, b}	18,636	Cecil D. Andrus-White Clouds	5,943	6.5%	31.9%
East Fork ^c (BLM)	21,480	Cecil D. Andrus-White Clouds	445	0.5%	2.1%

^aThis allotment is administered by the Forest Service.

^bThe Warm Springs Meadow Cattle and Horse Allotment has been closed through the donation process.

^cThis allotment is administered by the Bureau of Land Management

^dThe Upper East Fork Allotment has been closed through the donation process.

Current management of the active allotments generally involves rest/rotation or deferred rotation grazing systems in which no unit of an allotment receives livestock use that persists throughout the plant growing season. Timing of livestock grazing within each unit can vary from year to year, depending on variations in unit rotations, available forage, and livestock management (such as distribution and numbers turned out). Consequently, exact numbers and dates of livestock in the wilderness areas also vary from year to year. Routine livestock management and improvement maintenance is accomplished using non-motorized methods.

Two water troughs, three fence lines, and one enclosure occur in the Upper East Fork Allotment within the Hemingway-Boulders Wilderness and one enclosure, two fence lines, and two troughs occur in the Lower East Fork Allotment within the Cecil D. Andrus-White Clouds Wilderness.

6.13. Mineral Resources

Mining and prospecting have historically occurred in the Big Boulder Creek, Cherry Creek, Germania Basin, Washington Basin, and West Pass Creek areas. A minor level of personal mineral collecting occurs within the wildernesses.

Subject to valid existing rights, all federally managed lands located in wilderness are withdrawn from all forms of mineral entry, location, leasing, and patent. Public Law 92-400, the enabling legislation creating the Sawtooth NRA on August 22, 1972, withdrew those federal lands from mineral entry; however, valid existing rights established prior to the 1972 date for those Sawtooth NRA lands incorporated within the new wilderness are preserved. A total of 55 unpatented mining claims occurred within the wildernesses with valid existing rights as of the 1972 Sawtooth NRA withdrawal. While no active mineral exploration or mining occurs, the potential for mineral development may be considered moderate.

6.14. Fire Management

From 1997 to 2016, 23 wildfires have burned 10,921 acres of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness areas. Seventeen of these fires were caused by lightning (74%) and six were caused by campfires (26%). Most acreage burned during the 2005 Valley Road Wildfire, which burned into what is now the Cecil D. Andrus-White Clouds Wilderness. Historically, a full suppression strategy has been used on most fires across the two wildernesses.

From 1997 to 2016, all wildfires caused by campfires occurred less than 1.0 mile from a trail or lake. Trailheads, campgrounds, roads, and high-use recreational areas adjacent to the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses have historically had more ignitions and a higher percentage of human-caused fires compared to the wilderness areas themselves. This trend may influence the probability of a wildfire burning into designated wilderness.

Historically, the fire regime in much of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness areas could be characterized as having infrequent, large fires that burned with relatively high severity. Fire intervals, or the time elapsed between fires occurring, ranged between 70 and 300 years across the majority of each wilderness. Tree mortality greater than 50% was common, although patches of unburned vegetation or low severity typically occurred within the perimeter of large wildfires. Historically, a high degree of variance in fire interval and fire size has occurred, largely due to climate variability and/or climate change, elevation, and vegetation type.

Substantial lodgepole and whitebark pine community mortality has occurred over the last 10–15 years because of mountain pine beetle outbreaks. In many locations within the wildernesses, an abundance of snags and surface fuels now exist, making high-intensity and high-severity fire more likely.

Fire Regime Condition Class (FRCC) is a relative measure describing the degree of departure from the historical fire regime (Hann and Bunnell 2001). Approximately 12% of the wildernesses

is mapped as having a low departure (FRCC 1), 52% is moderately departed (FRCC 2), and 5% has a high departure (FRCC 3). Approximately 28% of the wildernesses is mapped as unburnable. At the landscape scale, FRCC suggests the fire regime and vegetation across half of the wildernesses has been moderately altered from its historical range of conditions. Fire exclusion has affected both wildernesses; but the overall impact on vegetation communities and fuel loading has been lower compared to vegetation communities that historically burned with higher frequency and lower intensity.

6.15. Lands and Special Uses

Non-recreation lands and special uses permits and issues include diversions and associated facilities, research permits, and commercial filming. Three existing diversions (Bowery, Deer Creek, and Last Chance) occur within the wildernesses. The number and type of facilities in wilderness will depend upon the final boundary survey. No private inholdings occur within these wildernesses.

6.16. Management Direction

General Direction

The Wilderness Act provides general direction for managing wilderness and protecting wilderness values. The Act states "... it is hereby declared to be the policy of the Congress to secure, for the American people of present and future generations, the benefits of an enduring resource of wilderness...unimpaired for future use and enjoyment as wilderness." It further states that Congress intended to manage these wildernesses so that, "...the earth and its community of life are untrammelled by man..." Wilderness is defined as an area "retaining its primeval character and influence..." and it "...appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; has outstanding opportunities for solitude or a primitive and unconfined type of recreation..." and "may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."

No other land designations are, by law, required to be managed as untrammelled. The Wilderness Act dictates not only the goals of stewardship but also how management is to be approached—with the utmost humility and restraint. When there is an opportunity for restraint, wilderness legislation directs the managing agency to scrutinize its actions and minimize control or interference with plants, animals, soils, water bodies, and natural processes. This legislative requirement is unique among all types of land management, defining wilderness in terms of how it is managed rather than what is there (Landres et al. 2015). Untrammelled is frequently described as the "wildness" in wilderness.

Regulation and Policy

The Forest Service will apply the standards and guidelines outlined in this WMP, in accordance with the level of compliance as set out in this document and in accordance with the National Forest System Land Management Planning, New Plan Development regulations (36 CFR 219.7) and FSM 2320. For the portion of the Cecil D. Andrus-White Clouds Wilderness on BLM-administered lands, the BLM will also manage consistent with standards and guidelines outlined in this WMP and in accordance with management direction identified in BLM Manual 8561 Wilderness Management Plans, BLM Manual 6340 Management of Designated Wilderness, and 43 CFR 6300.

The Forest Service manages wilderness to meet the five primary objectives, as outlined in FSM 2300, “Chapter 2320—Wilderness Management”. The BLM is guided by the objectives (referred to as goals in the BLM manual) for the management of wilderness, as defined in Appendix 1 of the BLM wilderness management planning manual (BLM Manual 8561²). Forest Service manual direction and BLM manual direction are compatible.

Desired Condition

The Forest Plan sets forth the following desired condition for designated wilderness (USDA Forest Service 2012):

People visiting wilderness within the National Forest can find outstanding opportunities for primitive and unconfined recreation, including exploration, solitude, risk, and challenge. The area is primarily affected by the forces of nature, with man’s imprint substantially unnoticeable.

The two wilderness areas covered in this WMP possess the qualities inherent in wilderness and were, therefore, designated by Congress as wilderness. The mandate from the Wilderness Act for each agency is to preserve wilderness character. This mandate is reiterated in the desired condition for wilderness as described above in the Sawtooth Forest Plan. This desired condition applies to the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness.

The Sawtooth Forest Plan includes the various Forest-wide Goals, Objectives, Standards, and Guidelines, specific to designated wilderness (Table 3; USDA Forest Service 2012).

Table 3. Forest-wide Goals, Objectives, Standards, and Guidelines, specific to designated wilderness

Direction	Number	Management Direction Description
Goal	WRGO01	Protect wilderness values as defined in the 1964 Wilderness Act. Improve opportunities and experiences through the development of wilderness management plans, partnerships with permittees and user groups, and interpretive and educational opportunities.
Objective	WROB02	Manage high mountain lakes within designated wilderness to be consistent with policies for fish and wildlife management in National Forest and Bureau of Land Management wilderness (Forest Service, BLM, and AFWA 2006 ^a). Jointly develop management agreements with the Idaho State Fish and Game Department for such areas.
Guidelines	WRGU01	Use public education and interpretation programs to foster wilderness values, and to maintain environmental qualities and primitive recreation experiences.

Source: USDA Forest Service 2012

^aUpdated from the Forest Plan direction to reflect new agreement date.

Management Prescription Category 1.1—Existing Wilderness

Management Prescription Categories (MPCs) are established in the Forest Plan. MPC 1.1 applies to all areas on the Sawtooth National Forest designated by Congress as wilderness. The main management objective is to preserve wilderness attributes, including natural appearance, ecological integrity, opportunities for solitude, opportunities for primitive recreation, and

² If revised, manual number may change.

identified special features. The area is managed to allow ecological processes to prevail, with little or no evidence of human development.

The Forest Plan contains the following Standards that apply specifically to MPC 1.1:

- Management actions shall be designed and implemented in manner that protects wilderness character.³
- Mechanical vegetation treatments, including salvage harvest, are prohibited.
- Road construction or reconstruction may only occur where needed and determined to be the minimum necessary:
 - To provide access related to reserved or outstanding rights, or
 - To respond to statute or treaty.
- Fire suppression strategies and tactics shall be in accordance with the appropriate WMP.⁴

Additional management guidance for the Sawtooth NRA is found in the Sawtooth Forest Plan. This management direction must also be followed (e.g., Forest-wide guidance, or substantial impairment evaluation), in addition to the wilderness management direction included in this WMP.

7. Proposed Action

The following management approach is intended to programmatically guide management of the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness. Implementation of individual, site-specific projects will depend on annual budgeting and completion of site-specific NEPA analyses. The intent of the management direction is to protect, preserve, and perpetuate wilderness character.

Management approach detailed in this section is to be applied across the entire area identified in the Sawtooth Forest Plan as MA 21 and the BLM portion of the Cecil D. Andrus-White Clouds Wilderness. The section, "Management Zones" establishes zones and describes varying direction by zone.

This direction amends the Sawtooth Forest Plan. Most direction is new, as these areas are newly designated as wilderness. Some direction, indicated with an asterisk (*), has been carried forward, generally *with modifications*, from previous management area direction in the Forest Plan. See Appendix 2 to compare the original management area direction and the revisions proposed for MA 21.

Management direction follows the numbering convention established in the Forest Plan. The first two numbers indicate the management area, in this case 21. The subsequent numbers increase numerically from 01 (e.g., 2101, 2102). However, the numbers appear out of order, as the

³ Editorial change to remove incorrect reference. Original language: Management actions shall be designed and implemented in accordance with the Frank Church—River of No Return Wilderness Management Plan.

⁴ Editorial change to remove incorrect reference. Original language: Fire suppression strategies and tactics shall be in accordance with the Frank Church—River of No Return Wilderness Management Plan.

numbering convention reflects the organization as it appears in the Forest Plan amendment. Here, the wilderness section is brought forward, as it sets the stage for, and is applicable to, the resources that follow.

Changes to the approved direction would require a Forest Plan amendment or NEPA analysis for the BLM portion of the Cecil D. Andrus-White Clouds Wilderness. If, for instance, monitoring shows that a certain standard is not working, or that a new guideline is needed, these changes may be made with a Forest Plan amendment.

7.1. Wilderness

The direction in this section applies to only the Hemingway-Boulders Wilderness and the Cecil D. Andrus-White Clouds Wilderness. Management direction for the Sawtooth Wilderness is located in Appendix I of the Sawtooth Forest Plan.

Goals

- 2103 Protect and preserve wilderness character.
- 2104 Manage and coordinate all resources and uses within the wilderness in a manner that recognizes the interrelationships of these components and their effect on wilderness character.
- 2105 Preserve the untrammeled quality of wilderness character by refraining from the deliberate manipulation or management of the biophysical environment except as necessary to protect or enhance overall wilderness character, to preserve human life, or to accommodate other activities in compliance with applicable laws.
- 2106 Provide for outstanding opportunities for solitude or primitive and unconfined recreation as long as visitor uses can be offered without degrading overall wilderness character, other significant resources, or public purposes of wilderness.
- 2107 Promote the natural quality of wilderness character by allowing natural process to dominate.
- 2108 Allow for special provision land uses determined by the Wilderness Act or designating legislation while minimizing developments, degradation to naturalness, and other impacts to the wilderness resource.
- 2109 Protect and preserve the undeveloped quality of wilderness character by removing nonconforming and/or unnecessary facilities and installations and minimizing human-caused surface disturbances. National Historic Preservation Act protocols will be followed.
- 2110 Manage the Forest Service and BLM portions of the Cecil D. Andrus-White Clouds Wilderness through a single management plan to provide a maximum amount of management consistency in wilderness protection across administrative boundaries.

Objectives

- 2111 Ensure, where possible, management between the Forest Service and BLM, including regulation of visitor uses, appears seamless to the public. Where differences in agency policy occur, and if allowable by law, regulation, or policy, the WMP will endeavor to apply the stricter policy to the adjacent land of the other agency.
- 2112 Ensure the BLM and Forest Service assist one another in wilderness management activities, including education and public outreach, recreational use, emergency management, law enforcement, fire management, and monitoring.
- 2113 Incorporate partners and volunteers to accomplish work in these wilderness areas.
- 2114 Minimize administrative flights that cannot avoid airspace over wilderness and fly them at the highest altitude possible (minimum 500 feet above ground level) to minimize disturbance to wilderness character. Avoid airspace over wilderness by routine administrative flights.

Standards

- 2115 Remove existing structures, developments, and installations unless they are determined to be the minimum necessary for the administration of the area as wilderness, or are:
 - a) Associated with existing rights,
 - b) Authorized range developments; or
 - c) Of significant historical or cultural value as identified by the Forest Archaeologist in consultation with the Idaho State Historic Preservation Officer, following National Historic Preservation Act protocols.
- 2116 Use locally sourced native seed or plants where reseeding or replanting is determined necessary.
- 2117* Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.
- 2118 Assess impacts and determine if management actions are needed to maintain wilderness character (see "Wilderness Monitoring" section) if campsites and travel encounters increase by 10% or more over two reporting periods.
- 2119 Assess impacts and determine if management actions are needed to maintain wilderness character if recreation site condition class increases by 5% or more over two reporting periods (see "Wilderness Monitoring" section).
- 2120 Assess impacts and determine if management actions are needed to maintain wilderness character if total miles of user-developed routes (i.e., unauthorized trails) increase by 3% or more over two reporting periods (see "Wilderness Monitoring" section).
- 2121 Ensure management activities are consistent with wilderness zone descriptions.

Guidelines

- 2122 Implement proposed actions only when necessary to meet minimum requirements for the administration of the areas as wilderness and to have the least impact to wilderness character.
- 2123 For the purpose of determining the minimum requirement, conduct a minimum requirements analysis for any non-emergency action, including those proposed by State and federal agencies that includes a prohibited use as described in Section 4(c) of the Wilderness Act, or for other actions that may impair wilderness character.
- 2124 Allow natural processes to dominate and maintain ecosystem functions, including natural restoration. Where human activities have substantially degraded the wilderness condition, active management may be considered to restore wilderness character. In addition to an MRA, the Framework for Evaluating Ecological Intervention (or most current) is a valuable method that may be used for evaluating necessary and appropriate action.
- 2125 Use natural openings for helicopter landing areas when needed for fire or emergency operations to avoid impacts to wilderness character and minimize intrusions.
- 2126 Implement the wilderness character monitoring framework identified in *Keeping It Wild 2* (Landres et al. 2015), in addition to the Forest Service *Wilderness Character Monitoring Technical Guide* (Landres, et al. in press), or most current agency direction. For the interagency Cecil D. Andrus-White Clouds Wilderness, the Forest Service protocols for wilderness character monitoring will be applied across the wilderness, and the Forest Service will take the lead in reporting wilderness character trends and data.

7.2. Sawtooth National Recreation Area General Management

Much of the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness is located in the Sawtooth NRA; therefore, the following Sawtooth NRA general management direction also applies therein and must work in concert with the Wilderness Act.

Standards

- 2101* Manage lands to ensure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the associated recreational values in accordance with Public Law 92-400.
- 2102* Management, utilization, and disposal of natural resources on federally owned lands (such as timber, grazing, and mineral resources) shall be allowed only insofar as their utilization does not substantially impair achievement of the purposes for which the recreation area was established. (As a management approach, "Substantial Impairment" is defined as that level of disturbance of the values of the SNRA that is incompatible with the standards and guidelines of the Forest Plan. The proposed activities shall be evaluated as to: 1) the period of impact; 2) the area affected; and 3) the importance of the impact on the SNRA values. Use process guidance in Appendix I of the Forest Plan to assist in determining compliance with this standard.)

7.3. Eligible Wild and Scenic Rivers

Standard

- 2127* Manage the eligible Wild and Scenic River corridors to their assigned classification standards and preserve their outstandingly remarkable values (ORVs) and free-flowing status until the rivers undergo a suitability study and the study finds them suitable for designation by Congress or releases them from further consideration as Wild and Scenic Rivers.
- 2128* The full range of fire suppression strategies may be used to manage wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on the river classifications, ORVs, and wilderness character.
- 2129* Wildland fire (prescribed fire and/or wildfire) may be used as management tools in any river corridor as long as ORVs and wilderness character are maintained within the corridor.

7.4. Air Quality

Goals

- 2130 Ensure that air quality over the wilderness is protected from pollution in excess of established standards.
- 2131 Manage smoke, while achieving wilderness management objectives, to provide for desirable air quality and visibility.

Objectives

- 2132 Monitor visibility to determine baseline air quality information through existing IMPROVE sites.

Guidelines

- 2133 Identify Wilderness Air Quality Values (WAQV) in an Air Quality Management Plan.
- 2134 Evaluate potential effects of proposed pollution sources from activities of outside the wilderness for violation of Class II Prevention of Significant Deterioration standards within the wilderness.
- 2135 Conduct monitoring procedures in a manner compatible with the preservation of wilderness character.
- 2136 Recognize fire as a natural process that may temporarily cause smoke impacts.

7.5. Soil, Water, Riparian, and Aquatic Resources

Goals

- 2137 Protect soil, water, riparian, and aquatic resources to preserve wilderness character.

- 2138 Maintain soil quality and long-term soil productivity by maintaining soil porosity; organic matter; hydrologic function (e.g., infiltration, water table, drainage, percolation); and buffering capacity (e.g., soil filtering and chemical regulation properties).

Objective

- 2139* Within the Germania Creek subwatershed, projects or activities must provide for protection of habitat for the isolated bull trout population above the falls on Germania Creek.
- 2140* Reduce effects to fish habitat and water quality from livestock grazing within the tributaries of the East Fork Salmon River and Slate Creek subwatersheds. The Upper East Fork Salmon subwatershed is the priority.
- 2141* Protect spawning and rearing areas within streams and rivers during critical spawning and incubation periods. The Upper East Fork Salmon subwatershed is the priority.

7.6. Vegetation

Objective

- 2142 Allow natural ecological processes to define the composition, abundance, and distribution of native biotic communities.
- 2143 Restoration activities may be considered and evaluated to return native biotic communities to natural patterns of abundance and distribution in areas where conditions are unable to recover naturally from human-caused disturbance (also see Objective 21118).

7.7. Botanical Resources

Goal

- 2144 Protect Region 4 sensitive species habitat to preserve wilderness character.

Objective

- 2145* Manage fire suppression tactics, livestock grazing, mining activities, recreational use, dispersed camping, firewood collection for personal use, or trail construction and maintenance to minimize impacts to whitebark pine.

7.8. Non-native Plants

Goal

- 2146 Minimize impacts to the untrammeled quality of wilderness character while effectively treating non-native, invasive plant species to maintain the natural quality.

Objective

- 2147 Refer to the *Boise and Sawtooth National Forests Invasive Plant Species Treatments Final Environmental Impact Statement* (USDA Forest Service 2017, or most current) and the forthcoming *BLM Challis Field Office Integrated Weed Management Program Environmental Assessment* (or most current) for direction on non-native invasive plant treatments within the two wilderness areas.

7.9. Wildlife Resources

Goal

- 2148 Allow natural processes and the forces of natural selection to be the primary factors determining the diversity of wildlife and fish species and their habitats.

Objectives

- 2149 Ensure healthy, viable, and naturally distributed wildlife populations in an effort to retain the areas' natural quality.
- 2150* Provide for high-quality mountain goat and bighorn sheep habitat by reducing summer and fall forage competition between domestic livestock where allotments overlap mountain goat and bighorn sheep habitat.
- 2151 Lakes and streams currently without fish that have been stocked in the past, may be considered for stocking if the land management agency and the State agree that no appreciable loss of scientific values or adverse effects on wilderness character will occur. Stocking previously unstocked waters is undesirable. In cooperation with the Idaho Department of Fish and Game, fishless lakes and streams that have never been stocked should remain fishless.
- 2152 Removal of fish from occupied waters may be considered to reestablish historic habitat for the return of native fish species, or to remove either native or non-native fish from historically fishless waters. When federal and State agencies agree removing fish is necessary for protecting and improving wilderness character, removal may occur contingent upon an MRA and NEPA analysis, as required. Methods may include using biological controls, such as the temporary use of a sterile, non-native predatory fish species.
- 2153 Minimize contact between domestic animals (e.g., pack goats, dogs) and bighorn sheep.

Standards

- 2154 Allow fish stocking by the State agency only in coordination with the Forest Service to perpetuate or recover native threatened or endangered species within historically occupied waters, or to reestablish or maintain non-native fish where established prior to wilderness designation and likely to survive perennially.
- 2155 Prohibit pack goats within Pack Goat Exclusion Area, as described in Figure 4. The boundary was modified to provide clarity for pack goat users by following trails and natural geographic features, such as ridgelines and drainages.

- 2156 Require the following measures from the North American Packgoat Association to minimize contact between bighorn sheep and domestic pack goats:
- All pack goats will be on leads or have leads attached to their collar or halter at all times.
 - All pack goats will be tethered at night within 30 feet of humans.
 - If bighorn sheep are observed within 100 yards of a potential camping area, pack goat users will take all reasonable measures to move their campsite to a different area. Hazing techniques may be used to deter bighorn sheep from moving closer to campsites if necessary.
 - Pack goat numbers will be limited to a maximum of three (3) pack goats per person, and a maximum of nine (9) pack goats per group.
 - When bighorn sheep are using trails for travel, pack goat users will move 100 yards off of the trail. If that distance is not attainable, the pack goat user will travel back along the trail away from the bighorn sheep and exit the trail when the 100-yard distance can be reached. Pack goat users will stay off the trail until bighorn sheep have passed. If visibility is limited to less than 100 yards up trail, a pack goat user will go to the trail and observe for bighorn sheep before continuing with pack goats.
 - When accessing browsing areas and water, a pack goat user will check for the presence of bighorn sheep before allowing access for pack goats. Whenever possible, water access will be limited to areas of unlikely bighorn sheep use.
 - If direct contact of a pack goat and a bighorn sheep is observed, the location and as much of a description as is possible of the sheep and incident will be written, photographed if possible, and reported to the appropriate agency as soon as reasonably possible.
 - If any pack goat becomes lost, missing, or separated from the owner and herd, every effort will be exhausted to locate and recover the lost pack goat. If the owner is unable to locate and recover the lost pack goat, the owner must contact the Sawtooth National Recreation Area by telephone immediately. A full disclosure of all available information shall be provided, including the last known location (GPS coordinates, legal description, geographic location, or name or number of trail or trailhead); the circumstances that resulted in it becoming lost; a description of the pack goat; and a description of any equipment it was carrying.
- 2157 Continue to work cooperatively with IDFG to reduce the risk of disease transmission or other stressors between bighorn sheep and domestic animals.

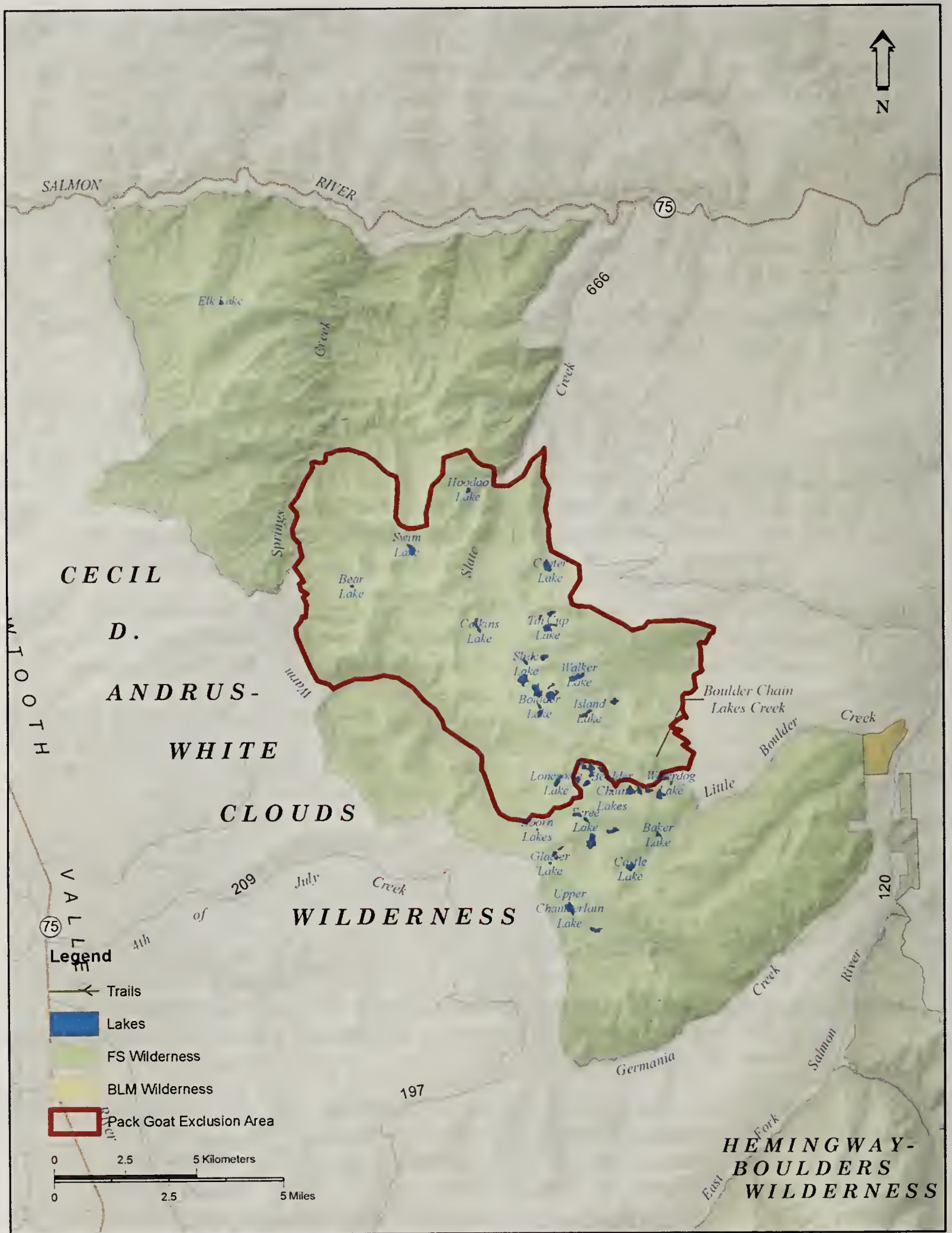


Figure 4. Map of the Pack Goat Exclusion Area

7.10. Recreation Resources

Commercial Services are addressed under a separate subheading below.

Goal

- 2158 Provide for the use and enjoyment of wilderness while maintaining outstanding opportunities for solitude or primitive and unconfined recreation.
- 2159 Continue to be proactive and adaptive when planning for and managing visitor use, including the physical and social setting, by using a variety of strategies and tools while preserving wilderness character. Use commonly accepted practices such as those laid out in the *Interagency Visitor Use Management Framework* (or more current strategy; IVUMC 2016) to guide and inform the decision-making process.

Objectives

- 2160 Use visitor education and indirect management techniques to achieve objectives, preferring indirect methods of reducing visitor impact. Consider direct methods when indirect methods are insufficient to adequately protect wilderness character. Do not wait until wilderness character has been irretrievably degraded to implement management restrictions.
- 2161 Maintain or improve existing opportunities for solitude by monitoring visitor use patterns that trigger the need for additional management actions. Refer to the “Wilderness Monitoring” section below and Chapter 4 of the Forest Plan (USDA Forest Service 2012) for monitoring requirements.
- 2162 Conduct law enforcement activities in a manner that minimizes impacts to wilderness character.
- 2163 Favor education and design (i.e., reconstruction and location of trails and campsites) for ensuring compliance with regulations and recommendations.
- 2164 Manage trails and routes to prevent resource damage and to minimize proliferation of unauthorized user-developed routes.
- 2165* Manage dispersed campsites and recreational activities to prevent them from expanding or deteriorating beyond a point where impacts to riparian and aquatic resources cannot be effectively addressed.

Standards

- 2166 Limit group size to a maximum of 12 people. (See exception for Native American tribes in the Tribal Rights and Interests section.)
- 2167 Limit the combined number of recreational stock in one group to 14 head of stock.
- 2168 Prohibit shortcutting trail switchbacks on foot or with recreational stock.
- 2169 Only allow campfires below 8,800 feet elevation and within 200 yards of Walker Lake, Island Lake, Upper and Lower Chamberlain Lakes (9,477 and 9,197 feet), and Boorn Lakes (Figure 5 and Figure 6).

- 2170 Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-up sites where topography does not allow for tethering more than the 200 feet from lakes, streams, and springs.
- 2171 Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs.
- 2172 Limit tying of recreational stock to live trees to a maximum of one hour.
- 2173 Require human waste to be buried and covered, at least 200 feet from water, campsites, and trails; or packed out.
- 2174 Prohibit recreational equine stock use within the following drainages: Slickenslide Creek above Quiet Lake; Boulder Chain Lakes Creek above Lodgepole Lake; Gunsight Creek; Bighorn Creek; and Big Boulder Lakes, excluding Walker and Island Lakes (see Figure 7).
- 2175* Manage winter recreation to minimize conflict with high-elevation wildlife species, including mountain goats and wolverine.
- 2176* Prohibit constructing new trails unless determined to be the minimum necessary to protect wilderness character.
- 2177 Require the use of weed-free feed or pellets for stock animals (FS Order Number 04-00-097; BLM Supplementary Rule LLID-931-000-L1020-0000-JP-0000252R).
- 2178 Remove the following trails from the Forest Service Trail inventory:
- Cecil D. Andrus-White Clouds Wilderness:
 - NFS trail 674—Above O’Caulkins⁵ Lake to Warm Springs Creek (NFS trail 671 junction; 3.9 miles)
 - NFS trail 684—Wickiup Creek (6.7 miles)
 - Hemingway-Boulders Wilderness:
 - NFS trail 113—The upper 5.2 miles of the South Fork of the East Fork of the Salmon River

⁵ Also alternatively identified as Ocalkens and Calkins.



Figure 5. Campfire restrictions within the Hemingway-Boulders Wilderness

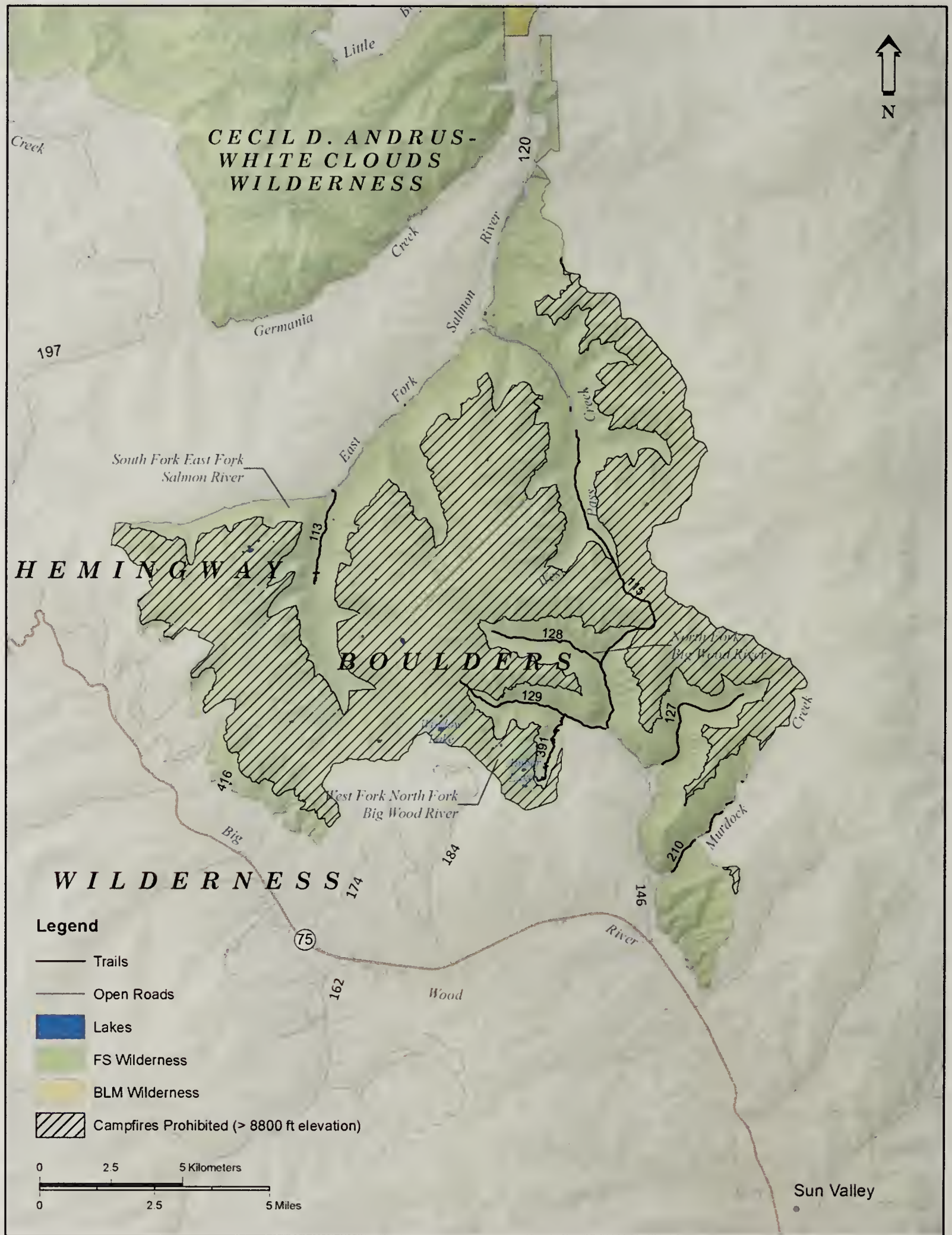


Figure 6. Campfire restrictions within the Cecil D. Andrus-White Clouds Wilderness

Guidelines

- 2179 Prevent human/wildlife encounters by emphasizing proper camping techniques and food storage and containment.
- 2180 Discourage off-trail route marking and remove user-created route markers (e.g., stacked rocks, flagging).
- 2181 Encourage the use of no trace fires (i.e., use of fire pans or fire blankets).
- 2182 Maintain the voluntary registration system.
- 2183 Encourage use of temporary stock containment systems and require tree-saver devices to minimize tree damage.

Commercial Services

Goals

- 2184 Ensure outfitters provide quality services that enable the public to use, access, enjoy, and understand the recreational and other values of wilderness, emphasizing opportunities for primitive or unconfined types of recreation, physical and mental challenge, inspiration, and solitude.
- 2185 Ensure outfitters protect the wilderness resource by modeling and helping the public understand how to use wilderness responsibly.
- 2186 Ensure outfitters play a role in providing opportunities for the public to develop awareness, appreciation and understanding of the wilderness resource and its natural and cultural history.

Objectives

- 2187 Maintain outfitter and guide priority use permit holder service days at existing actual use levels based on a review of actual use consistent with Forest Service and BLM handbook direction. Evaluate changes in amount of use, type of use, operating areas, or service day allocation using the most current guidance (e.g., needs assessment, capacity analysis), consistent with Forest Service and BLM handbook direction. Current direction is found at FSH 2709.14, Chapter 53 and BLM H-2930-1, IIIA.
- 2188 Develop temporary outfitter and guide use pools based on a review of actual use at the time of designation. Evaluate changes in the amount of use, type of use, or operating areas, using the most current guidance (e.g., needs assessment, capacity analysis) consistent with Forest Service and BLM handbook direction. Current direction is found at FSH 2790.14, Chapter 53.11. BLM policy (BLM H-2930-1 IIIA) allows for temporary uses, including the use of pools, as appropriate.

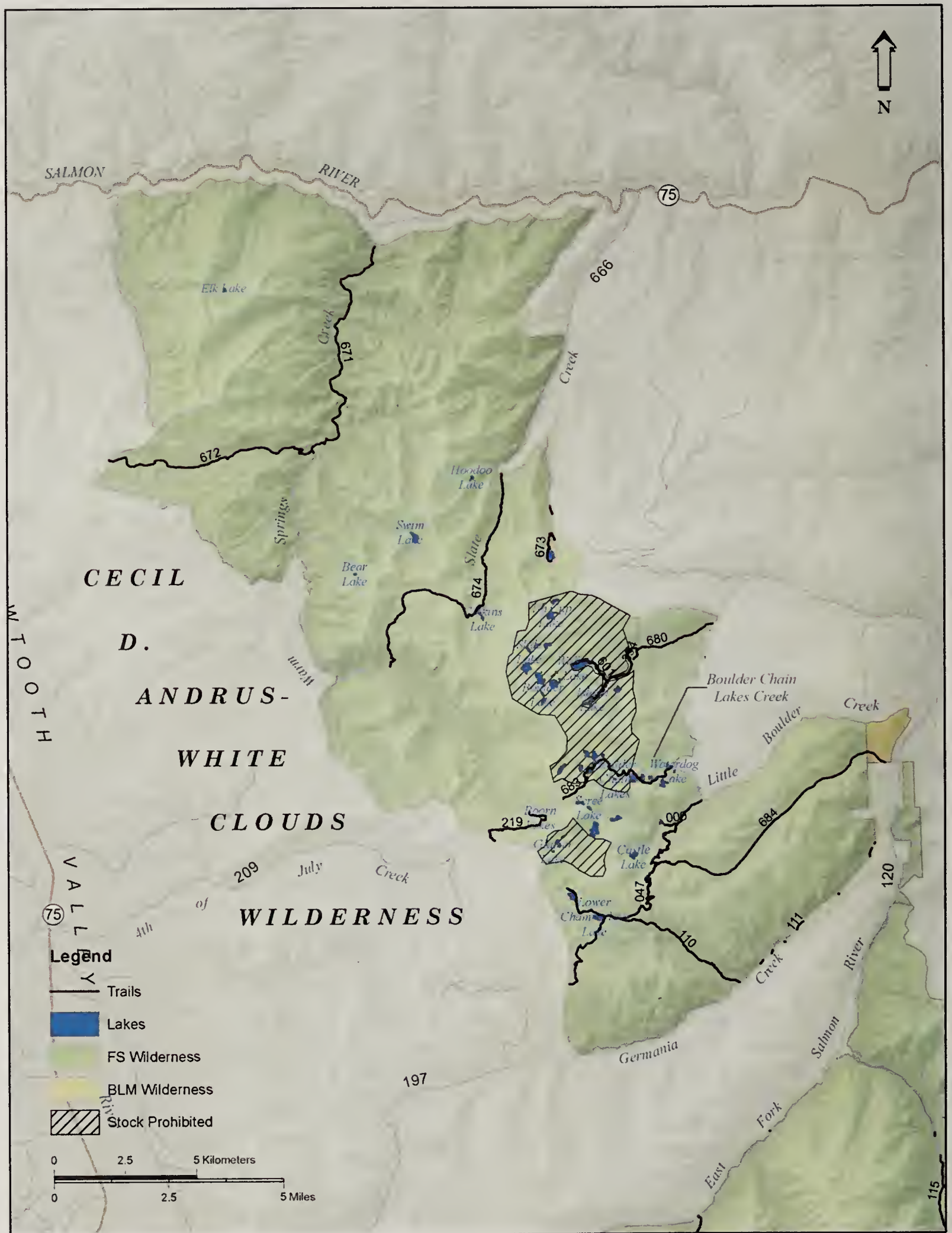


Figure 7. Equine stock closure areas

Standards

- 2189 Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g, and BLM H-2930-1, BLM 6340 B.2(i).)
- 2190 Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas.
- 2191 Ensure operating plans for priority use and temporary use outfitting and guiding permits direct outfitters to model appropriate wilderness practices and incorporate awareness of wilderness values in their interaction with clients and others.
- 2192 Prohibit caches (see FSM 2323.13(g) and BLM Manual 6340 B.2.j for additional direction).
- 2193 The Authorized Officer may consider exceptions for group sizes over 12 people and/or 14 head of stock on case-by-case basis through permit and operating plan; however, these exceptions would be rare and would not exceed the group size limit of 20 people and 25 head of stock.

7.11. Scenic Environment

Goal

- 2194 Preserve the scenic and visual qualities of wilderness, as they are significant to solitude and the undeveloped quality of wilderness character and play a significant role in the overall recreational experience of visitors.

Objective

- 2195 Preserve the scenic and natural landscape consistent with the protection of wilderness character.

Guideline

- 2196 Build facilities and structures, when needed for resource protection, out of natural materials that blend into the natural environment.
- 2197 Do not consider visual conditions changed by natural events and processes as detrimental to scenic qualities.

7.12. Heritage, Archaeological and Cultural Resources

Goals

- 2198 Protect and preserve significant cultural, archaeological, and historical resources as identified while managing for recreational, scenic, scientific, educational, conservation, and historic uses consistent with preservation of wilderness character.

Objectives

- 2199 Identify cultural resources prior to implementing new projects in order to protect and preserve these resources while minimizing impacts to wilderness character.

Guidelines

- 21100 Develop a management strategy that includes, but is not limited to, education/interpretation or signage outside of wilderness, or natural barriers to prevent additional damage if monitoring reveals that damage is occurring to cultural, archaeological, or historic resources. The wilderness specialist and archaeologist, in consultation with sovereign tribal governments and the State Historic Preservation Officer, will work together to develop the management strategy.

Standard

- 21101 Any undertakings, with the potential to affect cultural resources, will be conducted in compliance with the National Historic Preservation Act.

7.13. Tribal Rights and Interests

Goal

- 21102 Protect lands and sites of traditional and cultural significance, including religious, sacred, and ceremonial sites, important to Shoshone-Bannock, Shoshone-Paiute, and Nez Perce Tribes.

Objectives

- 21103 Continue consultation with affected tribes regarding wilderness management.
- 21104 Coordinate and consult with affected tribes regarding traditional Native American use practices while maintaining wilderness character.

Standards

- 21105 Coordinate and consult with tribes to maintain their right to gather fish, wildlife, and plants and access traditional cultural and religious sites while maintaining wilderness character.
- 21106 Group size and length of stay limitations do not apply to the Tribes when exercising off-reservation treaty rights.

7.14. Rangeland Resources

Goal

- 21107 Provide for continued livestock grazing in wilderness in a manner that minimizes impacts to wilderness character.

Objectives

- 21108 Consider the wilderness resource when preparing or modifying term grazing permits, annual operating instructions, or allotment management plans or when conducting NEPA analyses.

Standards

- 21109 Follow Congressional Grazing Guidelines (House Report 96-617 and House Report 105-405, Appendix A); FSM 2320 (Wilderness Management); the Sawtooth Forest Plan; the Challis RMP and applicable amendments; BLM Manual 6340; and 43 CFR 4100.
- 21110 Prohibit the use of motor vehicles for routine livestock monitoring, herding, and gathering.
- 21111 Require the use of natural materials when constructing or replacing existing facilities if their use would not impose unreasonable added cost. An exception may be granted when using other materials would require less frequent motorized or mechanized access to perform maintenance.
- 21112 Permit new range improvements only for the purpose of enhancing the protection of wilderness character.
- 21113 Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation.
- 21114* For FS-administered allotments, livestock fences must provide for big-game passage.
- 21115* For FS-administered allotments, forage utilization for riparian areas will not exceed 30% use of most palatable forage species or must retain a minimum 6-inch stubble height of hydric greenline species.

Guideline

- 21116 Routine livestock management activities in wilderness, including maintenance, would normally be accomplished by non-motorized, non-mechanized means. Requests by grazing permittees for occasional use of motorized or mechanized equipment or vehicles would be evaluated on a case-by-case basis through a MRA.
- 21117 Review wildlife damage control measures, including predator control, to determine the need for control pursuant to agency policy and regulation, and the method(s) to be used pursuant to cooperative agreements or memoranda of understanding. Actions that would involve uses generally prohibited under Section 4(c) of the Wilderness Act would may be considered and could be authorized if determined the minimum necessary. The authorized agency implementing control measures would provide post-action reporting to the Forest Service and BLM, as applicable. (FSM 2323.33c, and BLM Manual 6340 1.6C 21.c.viii(8))

7.15. Mineral and Geologic Resources

Goals

- 21118 Preserve the wilderness environment while allowing activities for the purpose of gathering information about mineral resources on existing mining claims.

Objective

- 21119 Where valid existing rights occur, provide direction for managing mineral activities in wilderness in accordance with agency directives and regulations and with consideration of all applicable State and federal requirements.
- 21120 Identify impacts to wilderness character and methods for its preservation in mining plans of operation. Reclamation efforts would serve to return the land as closely as possible to its natural condition.
- 21121 Ensure lands disturbed during mineral exploration and development activities are restored as nearly as practicable promptly upon completion or abandonment of operations. Plans of operations will stipulate reclamation and bonding requirements of the authorized operator.

Standard

- 21122 The plan of operation must outline all terms and conditions for reclamation and rehabilitation of an area upon completion of mineral exploration or development activity, including a timeline for removing all structures, equipment, and support facilities for the operation, and the area impacted by mineral operations must be restored as nearly as practicable to the contour and appearance of the landscape before operations commenced.

7.16. Fire Management

Goal

- 21123 Permit lightning-caused fire to play its natural role in ecosystem function.

Objectives

- 21124 Consider the full range of fire-management strategies and tactics (ranging from monitoring to full suppression) when responding to a wildfire in or near wilderness).
- 21125* Identify areas where lightning-caused wildfires can restore or maintain natural vegetative conditions; account for spatial and temporal changes in vegetation and fuels affecting the relative risk of wildfire impacting wildland-urban interfaces and other fire-affected values within and outside of wilderness.

Standard

- 21126 Obtain prior approval from the appropriate line officer, or designee, to use motorized equipment or mechanized transport in wilderness for fire management activities.

- 21127 On BLM-managed lands, obtain prior approval from the Field Office Manager, or designee for helicopter bucket work, dip sites, and water delivery, as well as motorized water pumps, aerial retardant application, air transport/personnel shuttle, supply drops, and chainsaw use. Prior approval from the District Manager must be obtained for motor vehicle use including engines, transports, crew trucks, UTV/ATV, as well as helispot construction and heavy equipment use.
- 21128 All or a portion of a wildfire originating from a natural ignition may be managed to maintain wilderness character and the unique resource values the wilderness areas were designated to protect.
- 21129 Initially suppress human-caused wildfire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety (*Interagency Standards for Fire and Fire Aviation Operations* [NIFC 2017]).

Guidelines

- 21130 Prescribed fire may be considered in the wilderness areas and will be evaluated consistent with Forest Service and BLM policy (FSM 2320, BLM 6340).
- 21131 Determine actions for each wildland fire that are consistent with protecting wilderness character while providing for firefighter and public safety and considering impacts to private property and developed facilities in surrounding areas.
- 21132* Coordinate across agencies and with Forest Service and BLM wilderness specialists and adjacent landowners, as appropriate, to develop compatible wildland fire management strategies.
- 21133 Avoid locating temporary wildfire management support facilities (e.g., spike camps, landing areas) in wilderness. When considered necessary, all efforts will be made to use areas with pre-existing impacts outside of Zone 1. Responder safety will be the first consideration when making this determination.
- 21134 Minimize suppression impacts to wilderness character by using Minimum Impact Suppression Tactics (MIST) and assigning Resource Advisor(s) with knowledge, training, and/or experience in wilderness management. Return disturbance caused by suppression actions to as natural a condition as possible.

7.17. Lands and Special Uses

For Outfitter & Guide direction, see the “Commercial Services” section under the “Recreation Resources” section.

Goals

- 21135 Allow special uses within the wilderness that are shown to meet an identified public need to the extent necessary for activities which are proper for realizing recreational or other wilderness purposes and meet the agency’s objectives and provide benefits to the wilderness resource.
- 21136 Allow for special provision land uses as determined by laws, regulations, and the agency’s policies and management plans, while minimizing developments, degradation to naturalness, and other impacts to wilderness character.

Objective

- 21137 Provide for continued use of existing special use authorizations as long as such uses are the minimum necessary, are consistent with the Wilderness Act, and are in the public interest.

Standards

- 21138 Do not permit competitive events, training events, and contests (FSM 2323.13h; BLM Manual 6340 1.6 C. 13. d.).
- 21139 Evaluate proposals for commercial filming in wilderness consistent with Forest Service policy (FSH 2709.11 45.51b), or most current policy, or BLM Manual 6340 (Section 1.6 C. 4), as applicable.
- 21140 Consider the direction for each zone when evaluating a proposal; zone direction may influence where and how approval is granted.

7.18. Wilderness Education and Interpretation

Goal

- 21141 Use education, information, and interpretation as a proactive approach in managing activities that may impact the preservation of wilderness character. Emphasize the value of wilderness, not just as a non-motorized recreation area, but as an undeveloped place of natural processes and personal risks.

Objective

- 21142* Provide educational information on areas susceptible to weed invasion and measures to help prevent non-native, invasive plant establishment and spread.
- 21143* Enhance public awareness and support through education about the role of fire in the ecosystem and fire's role in maintaining wilderness character.
- 21144 Emphasize proper camping techniques, food storage, and containment to minimize interaction with wildlife.
- 21145* Coordinate with tribal communities and others to provide public interpretation of American Indian sites.
- 21146 Provide educational information regarding proper management of dogs to minimize social conflicts or effects to wildlife (e.g., under voice or physical control, horse or hiker encounter etiquette).

Standards

- 21147 Develop and implement a wilderness education plan and monitor it for effectiveness.
- 21148 Interpretive information may be included on trailhead information signs or communicated elsewhere outside of wilderness but will not be located on signs in wilderness.

Guidelines

- 21149 Emphasize a proactive approach to wilderness education. Build partnerships and relationships with organization camps, group organizations, businesses, school and university programs, permittees, permanent and seasonal staff, and other users to integrate Leave No Trace and wilderness ethics into their operations.
- 21150 Communicate rules and regulations primarily outside of wilderness.

7.19. Research

For information on wildlife management actions, see the “Wildlife Resources” section and Forest-wide direction.

Goal

- 21151 Ensure research conducted in wilderness improves wilderness stewardship, provides benefits to society and science, and contributes to the preservation of wilderness character.

Objective

- 21152 The wildernesses are available for conducting inventory, monitoring, and research determined by the federal agency to be wilderness dependent. Proposals that do not contribute to stewardship of the area as wilderness will not be permitted if they can be accomplished outside of wilderness or cannot be conducted in a manner compatible with the preservation of wilderness character.

Standard

- 21153 Require researchers to provide a copy of findings to the Forest Service and BLM.

Guideline

- 21154 Require prior authorization for all parties interested in conducting research activities in wilderness. Proposals for scientific research may be evaluated through the Framework to Evaluate Proposals for Scientific Activities in Wilderness (Landres 2010, or most current). MRAs will be completed, as appropriate, to ensure activities are the minimum necessary for administering the wilderness area for wilderness purposes.

7.20. Search and Rescue

Goals

- 21155 Conduct search and rescue operations in such a manner that emphasizes the safety of both victims and rescuers, with minimal impact on wilderness character.
- 21156 Support and cooperate with County Sheriffs in search and rescue operations and provide information and education on wilderness law and policy.

Objectives

- 21157 Encourage collaboration, coordination, and agreements between the Forest Service and/or BLM and local Sheriff departments to develop search and rescue procedures in wilderness that are well-defined, respond to life-threatening situations in a timely manner, and protect wilderness character.

Standards

- 21158 Coordinate with the Counties to develop Search and Rescue Plans.
- 21159 Develop Memorandums of Understanding (MOUs) or other formal agreements with Custer and Blaine counties that cover the appropriate use of motorized equipment and mechanized transportation inside wilderness and identify the information needed for a Forest Service Line Officer/BLM Field Manager to authorize this use.

Guidelines

- 21160 Use the flow chart in Appendix 1 for approving motorized and mechanized emergency response.
- 21161 In emergency situations, consider the safety of the victim and the rescuers as the priority. Consider difficulty of access, time constraints, distance factors, and risks to safety of rescue team which may elevate the medical severity.
- 21162 Ensure search and rescue operations comply with wilderness regulations except as otherwise necessary to provide for human life or recovery. Use of motorized and mechanized equipment or vehicles, including medical evacuation by helicopter or wheeled devices, may be granted by the Forest Supervisor/BLM Field Manager (or designated authority) on a case-by-case basis.
- 21163 Use natural terrain features for helicopter landing areas. Care should be taken that vehicles used in search and rescue operations do not transport invasive species or cause unacceptable resource or social impacts. Immediately address any resource damage resulting from search and rescue operations.
- 21164 Reduce the need for search and rescue missions by promoting visitor awareness of inherent risks, lack of rapid response, and possible preventive measures.

7.21. Management Zones

Zoning is the practice of delineating areas in a wilderness where different biophysical or social resources call for applying varying management policies, actions, or visitor use restrictions. While zoning is not mentioned in the Wilderness Act, it is a concept that can be essential to managing the complex realities of wilderness in the 21st century. Biophysically and socially, wilderness areas are not homogeneous. In other words, not every acre is the same: some ecological areas may be more sensitive, or areas may be more attractive or accessible to visitors. Zoning aims to be proactive; working toward desired conditions. The management area is divided into four zones (Table 4, Figure 8, Figure 9):

- Zone 1—This zone has the lowest level of human use and disturbance and has the highest degree of natural integrity. Zone 1 represents the majority of each wilderness.

- Zone 2—This zone has a high degree of wilderness integrity and a low level of human disturbance and can be vulnerable to impacts from human use.
- Zone 3—The predominantly unmodified natural environment in this zone includes some popular destinations and more heavily used areas.
- Zone 4—This zone includes popular destinations and routes. A predominantly unmodified natural environment characterizes this zone; however, some areas are substantially affected by human activity. This zone represents the smallest portion of wilderness when compared to other zones.

Zones were developed based on current conditions (trails, campsites), current visitor use levels and patterns, and desired conditions to ensure non-degradation of wilderness.

Table 4. Proposed zoning—percentage of each zone and percent visitor use by zone

Proposed Zone	Zoning: Hemingway- Boulders	Visitor Use: Hemingway- Boulders*	Zoning: Cecil D. Andrus-White Clouds	Visitor Use: Cecil D. Andrus-White Clouds*	Zoning: Management Area Total
1	99%	1%	96%	4%	98%
2	<1%	10%	3%	4%	2%
3	<1%	12%	<1%	12%	<1%
4	<1%	77%	<1%	80%	<1%

*Percentages of visitor use are representative estimates. A full survey of the wildernesses was not available.

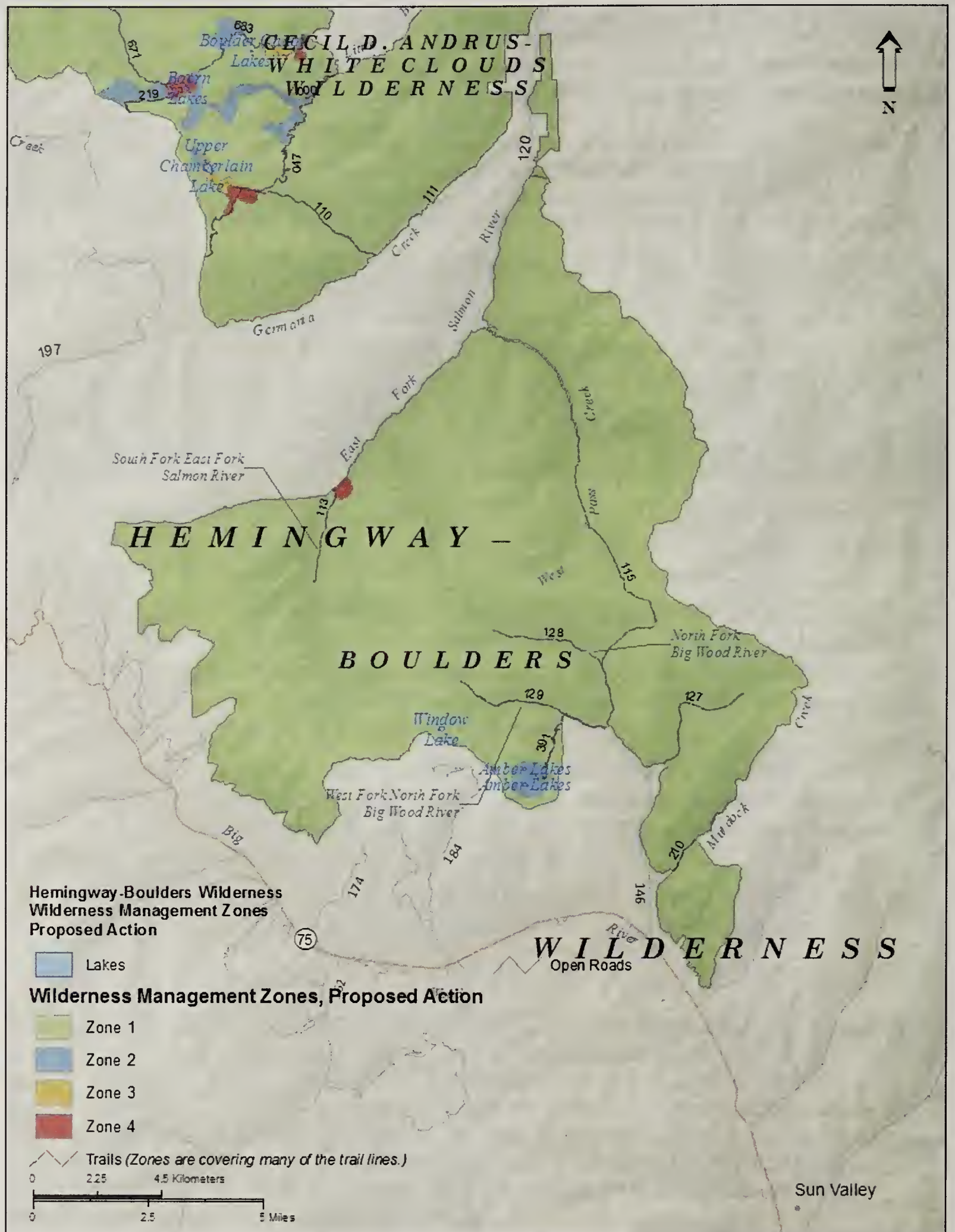


Figure 8. Hemingway-Boulders Wilderness proposed zoning



Figure 9. Cecil D. Andrus-White Clouds Wilderness proposed zoning

Zone 1

Desired Conditions

This zone has and is managed for the highest degree of naturalness.

Ecological processes operate naturally, with essentially no perceptible or measurable evidence of human impact or use. Management within the zone preserves the feeling of wildness for visitors.

This zone has outstanding opportunities for solitude and a primitive and unconfined type of recreation that requires self-reliance. This zone also offers challenge and risk. Encounters with other visitors are infrequent.

Visitor contacts by staff (wilderness rangers, volunteers, or other agency staff) are infrequent; however, staff may contact visitors, as needed, for education or to correct potential problems or impacts.

Pre-designation impacts may exist but are rehabilitating naturally. No recreational facilities are present.

Recreational impacts are not visible from year to year. Administrative or permitted camps are discouraged and no designated sites are established in this zone.

Goals

21165-Z1 The virtually unmodified natural environment found in this zone is preserved. This trail-less zone encompasses the lowest level of human disturbance and the highest degree of natural integrity.

Standards

21166-Z1 Non-historic facilities, installations, or developments are not present in this zone unless authorized through a valid existing right or grazing permit or are the minimum necessary for administering as wilderness. No NFS or BLM trails are present in this zone.

21167-Z1 No signs are present except in extremely rare instances for resource protection in this zone. No permanent signs are allowed.

Zone 2

Desired Conditions

A predominantly unmodified natural environment characterizes the zone. With the exception of the developed trail system and infrequent user-developed routes, the landscape appears largely unmodified, and no other facilities occur unless authorized through a valid existing right or grazing permit.

This zone functions as a wild place, and the expectation is that these areas are wild and unmodified. Impacts from human activity are minimized to prevent the transition from indiscernible to clearly evident.

This zone has outstanding opportunities for solitude and a primitive and unconfined type of recreation that requires self-reliance. This zone also offers challenge and risk. Encounters with other visitors are less frequent than in Zones 3 and 4.

Visitor contacts occur less frequently than in Zones 3 and 4. However, staff (wilderness rangers, volunteers, or other staff) may contact visitors, as needed, for education or to correct potential problems or impacts.

Few pre-designation impacts exist. Impacts and recreation facilities are minimized to preserve the primitive nature of the zone.

Trails and user-created routes are managed to retain natural appearances and preserve the primitive quality of this zone. Trail structures may exist for resource protection but are infrequent. Opportunities to escape from more developed landscapes are provided.

Some evidence of recreational use is visible. Campsites may be discernible but are few, and impacts are minimized. The potential for some soil compaction exists around the center of activity.

Goals

- 21168-Z2 A high degree of wilderness integrity and the lowest level of human disturbance are found in this zone. Access in this zone is cross-country or by lesser used trails and includes some access routes to high elevation lakes. Destination areas have low use and are vulnerable to human impact. Attention is placed on protecting or improving wilderness character in this zone, as it may easily be impacted.

Standards

- 21169-Z2 The highest trail standard in this zone is Class 2, with the exception of the existing Class 3 trails in the Hemingway-Boulders Wilderness: the Upper North Fork #128 and the western end of the West Fork-North Fork #129.
- 21170-Z2 Non-historic facilities, installations, or developments are not present in this zone unless authorized through a valid existing right or grazing permit or are the minimum necessary for administering the area as wilderness.
- 21171-Z2 No signs are present except in extremely rare instances as required for resource protection in this zone. No permanent signs are allowed.

Zone 3

Desired Conditions

A high degree of wilderness integrity is found in this zone, with human disturbance confined to NFS or BLM trails, recreation sites, and grazing allotments.

Human impacts on vegetation, soils, and water quality are minimized in areas of concentrated use.

Opportunities for solitude are available throughout the year. Moderate levels of use occur within this zone. Encounters with other visitors may occur.

A primitive and unconfined type of recreation requiring self-reliance is characteristic of this zone.

Visitor contacts may occur regularly for education and/or for enforcing rules and regulations.

Recreational facilities and structures may be present in rare circumstances, such as for resource protection. This zone is managed to concentrate use into existing disturbances. (Also see standard 2116.)

Trails are moderately developed and maintained. Opportunities to escape from more developed landscapes are provided while still being able to access a trail system.

Recreation sites are limited to previously disturbed areas to minimize soil compaction and reduce loss of vegetative ground cover. Campsites density is low to moderate, and quantity is sufficient to accommodate use without establishing new sites; however, bare mineral soil may exist on sites. Campsite impacts are likely to be apparent and persist from year to year.

Goals

21172-Z3 The predominantly unmodified natural environment is preserved and impacts at popular destinations and along popular trails are minimized. This zone includes some sites that have been noticeably affected by human activity.

Standards

21173-Z3 The highest trail standard in this zone is Class 3.

21174-Z3 Signs may be present at trail junctions and, in rare cases, may be found elsewhere for resource protection.

Zone 4

Desired Conditions

A high degree of wilderness integrity is maintained to the maximum extent practicable.

This zone receives the majority of recreation use and contains the most developed trails within the wilderness. This zone may include recreation facilities necessary for the protection of wilderness character.

Human impacts on vegetation, soils, and water quality are minimized in high use areas.

Opportunities for solitude are available but are most likely to occur during the fall, winter, and spring seasons. Encounters with other visitors are likely during the summer season.

Visitor use is managed in a manner that preserves the opportunities for primitive and unconfined types of recreation found in this zone.

Visitor contacts may occur regularly for education and/or for enforcing rules and regulations.

Recreational facilities and structures may be present in rare circumstances, such as for resource protection. This zone is managed to concentrate use into existing disturbances. (Also see standard 2116.)

Travel in this zone occurs on developed trails. Trails are developed and maintained to standard.

Recreation sites are limited to previously disturbed areas to minimize soil compaction and reduce loss of vegetative ground cover. Campsites density is moderate, and quantity is sufficient to accommodate use without establishing new sites; however, bare mineral soil may exist on sites. Campsite impacts are apparent and persist from year to year.

Goals

21175-Z4 Non-degradation of wilderness character is emphasized by minimizing impacts from human activity. This zone includes highly popular destinations and heavily used trails within the wilderness.

Standards

21276-Z4 The highest trail standard in this zone is Class 3.

21277-Z4 Signs may be present at trail junctions and may be infrequently used elsewhere for resource protection.

8. Wilderness Monitoring

The monitoring program will provide a greater understanding of the overall and specific condition of each wilderness. Information generated in monitoring wilderness conditions will indicate 1) the current state of wilderness character; 2) how wilderness character is changing over time; 3) how stewardship actions are affecting wilderness character; and 4) what stewardship priorities and decisions would best preserve and sustain wilderness character.

As indicated above, the two agencies will follow the wilderness character monitoring framework identified in *Keeping It Wild 2* (Landres et al. 2015), in addition to the forthcoming Forest Service Wilderness Character Monitoring Technical Guide (Forest Service Technical Guide; Landres, et al. in press), or most current Forest Service direction. The Cecil D. Andrus-White Clouds Wilderness is currently one of 36 wilderness areas co-managed by more than one agency. Therefore, for consistency within the Cecil D. Andrus-White Clouds Wilderness, Forest Service protocols will be applied across the wilderness, and the Forest Service will take the lead in reporting wilderness character trends and data.

Keeping It Wild 2 (Landres et al. 2015) establishes monitoring questions and indicators for each quality of wilderness character. The Forest Service Technical Guide expands the direction from *Keeping It Wild 2* (Landres et al. 2015), identifying specific measures for each indicator (e.g., index of encounters) and establishing thresholds for those indicators. The thresholds set in the “Wilderness” section above align with the Forest Service Technical Guide direction. When thresholds are exceeded, additional management actions may be necessary. Specifically, the agencies will impose or adjust visitor use restrictions if monitoring shows a substantial increase in visitor use conflicts and/or indicates visitor use is causing unacceptable impacts to resources or wilderness character. Basic recreation management actions are described in the “Glossary”.

Specific protocols for gathering data, including protocols for data collection, analysis, and storage in a national database, and threshold for change are provided in the Forest Service Technical Guide. Baseline data will be established in the *Recreation Site Plan* and *Solitude Monitoring Plan* developed for these two areas.

9. Plan Implementation

9.1. Activities Associated with Plan Implementation

The following list reflects the implementation actions identified in this WMP. Actual implementation would be subject to staff and funding availability outside the control of this WMP.

Ongoing Activities

Ongoing activities include actions that are ongoing or would be implemented upon adoption of the WMP:

- Install and maintain wilderness boundary signs
- Enforce visitor use restrictions
- Provide visitor information and education
- Monitor wilderness character
- Maintain trails
- Manage outfitter permits
- Manage wildfires
- Manage grazing permits
- Treat invasive non-native plants

Future Activities

Some actions may require further planning and public scoping not covered by this WMP, such as those prompted by changing resource conditions. These actions may require an MRA and/or site-specific NEPA analysis. Below is a summary actions that may require further analysis:

- Restoration activities
- Rehabilitation
 - Undesirable or highly impacted campsites, social trails, or stock areas
 - Unauthorized vehicle impacts
- Removal of unnecessary non-historic developments or structures. National Historic Preservation Act protocols will be followed.
- Control of infestations of noxious weeds and non-native invasive plant species
- Recreation management actions in response to exceeding thresholds identified in this WMP
- Warm Springs Fence identified in the Record of Decision for the East Fork Allotment

10. Plan Evaluation

This WMP will be revised when management direction no longer meets wilderness management objectives or when a change in the existing situation warrants revised management. The need for revision would be reviewed as conditions warrant and if the decision is made to revise this WMP, revision would be accomplished with public participation. Minor revisions, such as typographical or cartographical errors or terminology changes, may be made by inserting an errata sheet.

11. Glossary

Assigned Outfitter Camp

A location authorized for use and occupancy by an outfitting and guiding permit and for which a fee is paid.

At Risk

This term originates from BLM protocols used to assess grazing impacts, namely properly functioning conditions. 'Functional—At Risk' is defined as riparian-wetland areas that are in functional condition, but that have an existing soil, water, or vegetation attribute that makes them susceptible to degradation.

Cache

Equipment, personal property, supplies or stock feed stored and left unattended for 16 consecutive days on National Forest lands or 14 days on BLM lands.

Campsite Condition Index

The impact index/condition class is the sum of nine weighted parameters including vegetation loss, mineral soil increase, tree damage, root exposure, stock evidence, development, cleanliness, social trails and camp area. The range of the impact index is divided into four condition classes (light impact through extreme impact).

Camp Encounters

The daily (8-hour period) mean number of camping groups visible or audible from a visitor's campsite during the primary use season.

Cherry-stem

A route that is excluded from the designated wilderness by a non-wilderness corridor having designated wilderness on both sides. This is called a "cherry-stem," since the road bears some resemblance to a cherry-stem jutting into the wilderness area.

Clean Water Act

An Act of Congress which establishes policy to restore and maintain the chemical, physical and biological integrity of the Nation's waters.

Climate Change

Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

Climate Variability

Climate variability refers to variations in the mean state and other statistics (such as standard deviations, the occurrence of extremes) of the climate on all temporal and spatial scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability).

Commercial Enterprise

Any use or activity undertaken for the purpose of sale of products or services, for the generation of funds or revenue, or for the promotion of a product, individual or business, regardless of whether the use or activity is intended to produce a profit, including any use or activity where an entry or participation fee is charged. (BLM Manual 6340)

FSH 2709.14, section 53.1e - Commercial Use or Activity. Any use or activity on National Forest System lands:

1. Where an entry or participation fee is charged, or
2. Where the primary purpose is the sale of a good or service and, in either case, regardless of whether the use or activity is intended to produce a profit (36 CFR 251.51).

Desired Condition

A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed.

Developments

Per the Wilderness Act (Section 2c) "An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation..."

Permanent Improvement. A structural or nonstructural improvement that is to remain at a particular location for more than one field season. Permanent improvements include such items as trails, toilet buildings, cabins, fences, tent frames, fire grills, and instrumentation stations. (FSM 2320.5)

Temporary Structure. Any structure that is easy to dismantle, that could be removed completely from a site between periods of actual use, and that must be removed at the end of each season of use if the non-use period is greater than 30 days. (FSM 2320.5)

Reference BLM Manual 6340, or the most current BLM wilderness policy for definitions.

Dispersed Campsite

Camping anywhere on National Forest or BLM lands outside of a designated campground. Dispersed camping means there are no toilets, no picnic tables, no trash cans, no treated water, and no fire grates.

Drop Camp

Camp whose location is either of the client or outfitters choosing to which the client is packed in and dropped off. The camp components may be provided either by the client or the outfitter. The outfitter provides no guiding services.

Endangered Species Act

An Act of Congress intended to protect species and subspecies of plants and animals that are of "aesthetic, ecological, educational, historical, recreational, and scientific value."

Geomorphic Integrity

An assessment and comparison of existing soil-hydrologic conditions with historical conditions that existed before Euro-American settlement. Upland, riparian, and stream conditions are assessed to determine how their integrity and resilience may have changed due to effects from past or current human-caused (e.g., road construction, timber harvest, livestock grazing) or natural (e.g., wildfire, floods) disturbance.

Goals

A plan may include goals as plan components. Goals are broad statements of intent, other than desired conditions, usually related to process or interaction with the public.

Guidelines

A guideline is a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

Management Area

An area with similar management objectives and a common management prescription, as described in the Forest Plan.

Management Prescription Category (MPC)

MPCs are broad categories of management prescriptions that indicate the general management emphasis prescribed for a given area.

Minimum Requirements Analysis (MRA)

The process by which allowances for one of the eight prohibited uses described in Section 4(c) of the Wilderness Act are analyzed to determine if they are “necessary to meet minimum requirements for the administration of the area for the purpose of [the Wilderness] Act.” May also be known as the Minimum Requirements Decision Guide (MRDG), which is the document used to perform the analysis. Also see <http://www.wilderness.net/MRA> for more information, and a copy of the current form.

National Environmental Policy Act (NEPA)

The National Environmental Policy Act of 1969 requires environmental analysis and public disclosure of federal actions.

National Wilderness Preservation System

All lands managed under the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

Natural

Area appears to have been primarily affected by the forces of nature and are substantially free from the effects of modern civilization.

No Trace Campfires

Campfires that leave no trace of occurrence, such as scorched vegetation and soils, blackened earth and wood, charcoal and ashes. A campfire that leaves no trace occurs on a firepan or fire blanket, which protects the earth (vegetation and soil) from the burning and sterilization effects of a campfire. Effective firepans and fire blankets are carried in and out of the wilderness by

users, whom disperse the cold/wet charcoal/ashes away from the camp, thus leaving no trace of its occurrence.

Objectives

A concise statement of actions or results designed to help achieve goals. Objectives form the basis for project-level actions or proposals to help achieve goals. The time frame for accomplishing objectives, unless otherwise stated, is generally considered to be the planning period. More specific dates are not typically used because achievement can be delayed by funding, litigation, environmental changes, and other influences beyond the agency's control.

Other Features of Value

Area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. Though not required of any wilderness, where they are present they are part of that area's wilderness character and must be protected as rigorously as any of the other four required qualities.

Outstanding opportunities for solitude or a primitive and unconfined type of recreation

Area provides outstanding opportunities for people to experience solitude or primitive and unrestricted recreation including the values associated with physical and mental inspiration, challenge, self-reliance, self-discovery, and freedom.

Priority Use

Authorization of use for up to 10-years, based on the holder's past use and performance and applicable programmatic or project decisions to allocate use. Except as provided in 36 CFR Part 251, Subpart E, authorizations providing for priority use are subject to renewal (sec. 53.1m). (FSH 2709.14, section 53.1e.)

Progressive Camps

A series of camps used during trips through an area. Duration of use is usually 1-2 nights per location. These camps are not set up in advance of arrival and are removed as the party moves on.

Recommended Wilderness

In developing a proposed new land management plan or proposed plan revision, the FS is required (FSM 1923) to "identify and evaluate lands that may be suitable for inclusion in the National Wilderness Preservation System and determine whether to recommend any such lands for wilderness designation." (36 CFR 219.7(c)(2)(v)) Management of a recommended area must protect and maintain the social and ecological characteristics that provide the basis for wilderness recommendation.

Recreation Management Actions

Actions for managing recreational use fall into one of three categories: engineering, education and enforcement. Engineering includes site design, construction and maintenance; for example, providing, removing or relocating facilities (stock ties, trails), or using vegetation or other physical barriers to direct visitor use. Information and education (**indirect management**) is most commonly employed to modify visitor behavior, adjust visitor attitudes and expectations, and alter the spatial and temporal distribution of use. Common examples include the Leave No Trace program, signs, and visitor contacts. Regulations with enforcement (**direct management**) can be used to implement all management strategies. Examples include restricting or prohibiting access to specific locations, access at particular times, certain types of behavior, particular activities,

equipment or modes of travel, length of stay, and group size. For more information see the Visitor Use Management Framework (Interagency Visitor Use Management Council, 2016).

Recreation Site

A place where visible impacts to vegetation or soil are documented as a result of recreational use, may include campsites, viewpoints, or day use areas.

Range Improvement

(FSM 2240) Any activity or program on or relating to rangelands which is designed to improve production of forage; change vegetative composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock and wildlife.

Restore or Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.

Service Day

An allocation of use constituting a day or any part of a day on National Forest System lands for which an outfitter or guide provides services to a client. The total number of service days is calculated by multiplying each service day by the number of clients on the trip. (FSH 2709.11, Chapter 41.53d)

Spike Camp

A temporary camp generally located in a more remote location, with bare necessities and fewer occupants than other types of camps. Spike camps are generally supplied from a base camp.

Special Provisions

Legislated exceptions to the 1964 Wilderness Act Section 4(c) prohibitions against commercial enterprise, permanent roads, motor vehicles, motorized equipment, aircraft landing, mechanical transport, structures and installations. Occasionally referred to as “non-conforming uses.”

Special-Use Permit

A special-use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System lands or facilities for specific purposes, and which is both revocable and terminable. For example, research, outfitting and guiding.

Standards

A standard is a constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

Stock

Recreational Stock—Includes all stock used for recreation, including horses, mules, goats and llamas.

Packstock—Domestic animals used to transport people or equipment from one location to another (not including dogs).

Subwatershed Vulnerability

An assessment of a subwatershed’s sensitivity to disturbance and its resiliency or natural ability for restoration.

Tree Saver Device

A strap or webbing used to protect trees from damage. When using a tree as an anchor point for a stock containment system, wrapping cable, rope or chain around it causes damage to the tree. Using webbing can help eliminate the risk of damaging or 'ringing' the bark.

Temporary Use

Short-term, non-renewable outfitting and guiding use that is authorized in increments of 50 service days, up to a maximum of 200 service days in a 180-day period. (FSH 2709.14, section 53.1e.)

Temporary Use Pool

A pool of service days or quotas in a use area that are reserved for short-term, non-recurring, seasonal distribution during an open season to qualified applicants who do not hold a priority use permit in that use area, and thereafter may be distributed to all qualified applicants on a first-come, first-served basis. (FSH 2709.14, section 53.1e.)

Total Maximum Daily Load (TMDL)

A regulatory term in the U.S. Clean Water Act, describing a value of the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Travel Encounters

The mean number of other groups (or people) seen per 8-hour day while in wilderness during the primary use season.

Undeveloped

Area is essentially without permanent improvements or the sights and sounds of modern human occupation, and it retains its primeval character.

Untrammeled

Area is unhindered and free from intentional actions of modern human control or manipulation.

User-Developed Routes

These routes are unplanned, unauthorized trails or roads that have not been designated and managed as a trail by the federal agency. In wilderness, trails are generally created by the repeated passage of people heading to the same destination; sometimes called social trails.

Water Quality Integrity

An assessment and comparison of existing water quality conditions with historical conditions that existed before Euro-American settlement. Physical, chemical, and biological water conditions are assessed to determine how their integrity and resilience may have changed due to effects from past or current human-caused or natural disturbance.

Wilderness

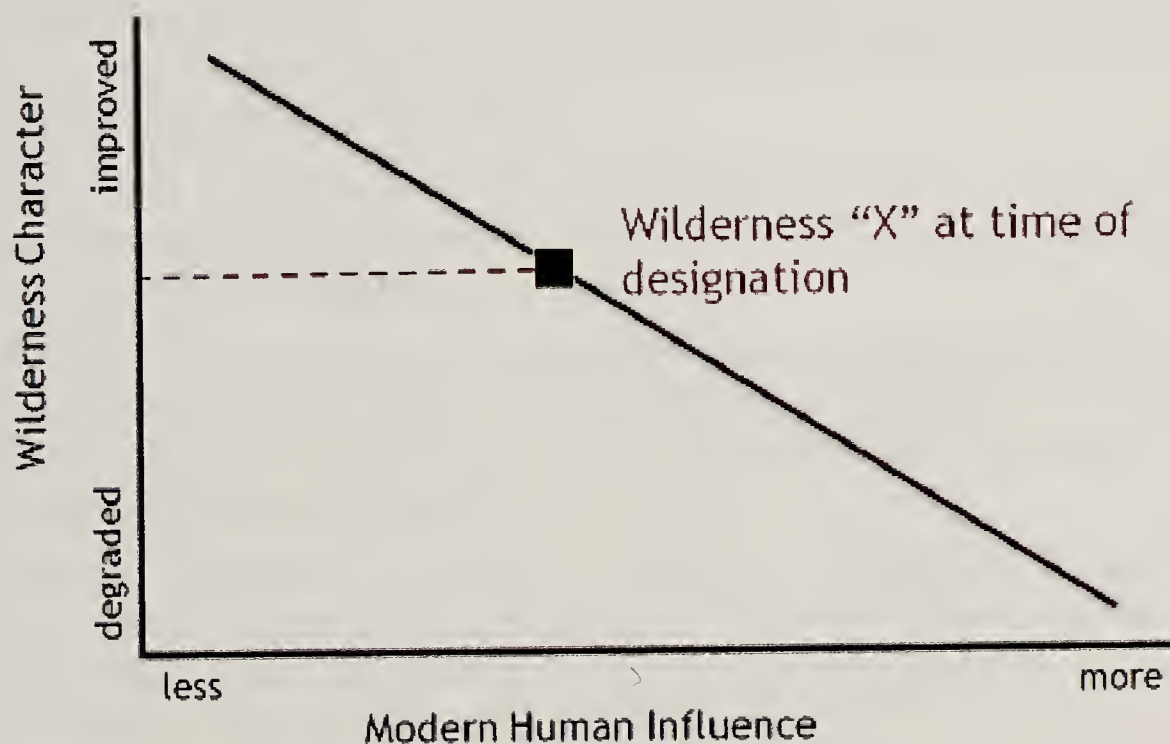
Wilderness is a legal designation designed to provide long-term protection and conservation of Federal public lands designated by Congress as part of the National Wilderness Preservation System. Wilderness is defined by the Wilderness Act of 1964 as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain...Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of

nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."

Wilderness Character

The central mandate of the Wilderness Act is to preserve wilderness character, a concept that distinguishes wilderness from all other lands. The four managing agencies have defined it as "A holistic concept based on the interaction of 1) biophysical environments relatively free from modern human manipulation and impact, 2) personal experiences in natural environments relatively free from the encumbrances and signs of modern society, and 3) symbolic meanings of humility, restraint, and interdependence that inspire human connection with nature." Statutory language of the Wilderness Act, Section 2(c), is used to identify five qualities of wilderness character: Untrammeled, Natural, Undeveloped, Outstanding Opportunities for Solitude or a Primitive and Unconfined Type of Recreation, and Other Features of Value.

The following graphical representation of the primary goal of wilderness management—to preserve wilderness character—is shown here. Wilderness managers must fulfill the congressional mandate to "preserve wilderness character" and not to allow the black square to slide down the diagonal line. For more information see FSM 2320 or BLM Manual 6340.



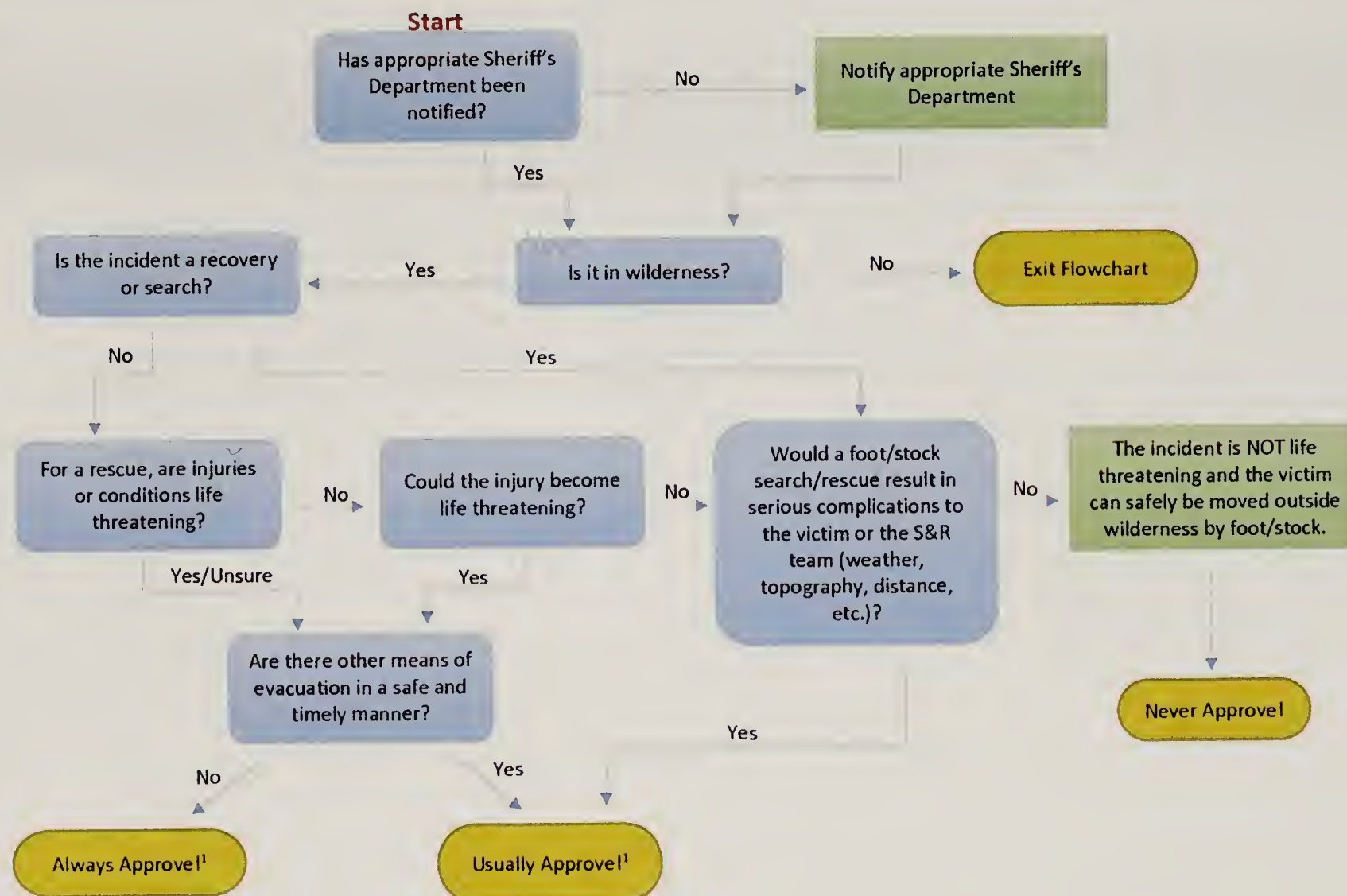


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Appendix 1—Approval Guidelines for the Use of Motorized and Mechanized Equipment or Vehicles for Search and Rescue



¹ Permission can only be granted by the Forest Supervisor/BLM Field Manager (or his/her acting) on a case-by-case basis.



Appendix 2—Direction Crosswalk

The following table summarizes the direction brought forward from the pre-existing management areas (MA 03 and MA 04) into the wilderness management plan. The direction listed under the Proposed Action indicated with an asterisk (*) has been carried forward, generally *with modifications*, to be in compliance with the Wilderness Act.

Direction Crosswalk

MPC/ Resource Area	Direction	Wilderness Management Plan	Management Direction Description – 03	Management Direction Description – 04
Sawtooth NRA	Standard	Manage both federal and private lands to ensure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the associated recreational values in accordance with Public Law 92-400.	0301: Manage both federal and private lands to ensure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the associated recreational values in accordance with Public Law 92-400.	0401: Within the Sawtooth NRA, manage both federal and private lands to ensure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the associated recreational values in accordance with Public Law 92-400.

MPC/ Resource Area	Direction	Wilderness Management Plan	Management Direction Description – 03	Management Direction Description – 04
	Standard	<p>Management, utilization, and disposal of natural resources on federally owned lands (such as timber, grazing, and mineral resources) shall be allowed only insofar as their utilization does not substantially impair achievement of the purposes for which the recreation area was established.</p> <p>(As a management approach, “Substantial Impairment” is defined as that level of disturbance of the values of the Sawtooth NRA that is incompatible with the standards and guidelines of the Forest Plan (contained in this document). The proposed activities shall be evaluated as to: 1) the period of impact; 2) the area affected; and 3) the importance of the impact on the Sawtooth NRA values. Use process guidance in Appendix I to assist in determining compliance with this standard.)</p>	<p>0302: Management, utilization, and disposal of natural resources on federally owned lands (such as timber, grazing, and mineral resources) shall be allowed only insofar as their utilization does not substantially impair achievement of the purposes for which the recreation area was established.</p> <p>“Substantial Impairment” is defined as that level of disturbance of the values of the Sawtooth NRA that is incompatible with the standards and guidelines of the Forest Plan (contained in this document). The proposed activities shall be evaluated as to: 1) the period of impact; 2) the area affected; and 3) the importance of the impact on the Sawtooth NRA values. Use process guidance in Appendix I to assist in determining compliance with this standard.</p>	<p>0402: Within the Sawtooth NRA, management, utilization, and disposal of natural resources on federally owned lands (such as timber, grazing, and mineral resources) shall be allowed only insofar as their utilization does not substantially impair achievement of the purposes for which the recreation area was established. “Substantial Impairment” is defined as that level of disturbance of the values of the Sawtooth NRA that is incompatible with the standards and guidelines of the Forest Plan (contained in this document). The proposed activities shall be evaluated as to: 1) the period of impact; 2) the area affected; and 3) the importance of the impact on the Sawtooth NRA values. Use process guidance in Appendix I to assist in determining compliance with this standard.</p>
Eligible Wild and Scenic Rivers	Standard	<p>Manage the eligible Wild and Scenic River corridors to their assigned classification standards, and preserve their ORVs and free-flowing status, until the rivers undergo a suitability study and the study finds them suitable for designation by Congress or releases them from further consideration as Wild and Scenic Rivers.</p>	<p>0313: Manage the eligible Wild and Scenic River corridors to their assigned classification standards, and preserve their ORVs and free-flowing status, until the rivers undergo a suitability study and the study finds them suitable for designation by Congress or releases them from further consideration as Wild and Scenic Rivers.</p>	<p>0413: Manage the eligible Wild and Scenic River corridors to their assigned classification standards, and preserve their ORVs and free-flowing status, until the rivers undergo a suitability study and the study finds them suitable for designation by Congress or releases them from further consideration as Wild and Scenic Rivers.</p>

MPC/ Resource Area	Direction	Wilderness Management Plan	Management Direction Description – 03	Management Direction Description – 04
Eligible Wild and Scenic Rivers	Guideline	Wildland fire (prescribed fire and/or wildfire) may be used as management tools in any river corridor as long as ORVs are maintained within the corridor.	0315: Prescribed fire and wildland fire may be used as management tools in any river corridor as long as ORVs are maintained within the corridor. (Modified as part of the 2012 Forest Plan amendment)	0415: Prescribed fire and wildland fire may be used as management tools in any river corridor as long as ORVs are maintained within the corridor. (Modified as part of the 2012 WSC amendment)
Eligible Wild and Scenic Rivers	Guideline	The full range of fire suppression strategies may be used to manage wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on the river classifications and ORVs.	0316: The full range of fire suppression strategies may be used to manage wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on the river classifications and ORVs.	0416: The full range of fire suppression strategies may be used to manage wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on the river classifications and ORVs.
Soil, Water, Riparian, and Aquatic Resources	Objective	Within the Germania Creek subwatershed, projects or activities must provide for protection of habitat for the isolated bull trout population above the falls on Germania Creek.	0326: Maintain the endemic bull trout population in the Germania Creek subwatershed above the falls on Germania Creek.	
	Objective	Reduce effects to fish habitat and water quality from livestock grazing within the tributaries of the East Fork Salmon River, and Slate Creek subwatersheds. The Upper East Fork Salmon subwatershed is the priority.	0330: Reduce adverse grazing effects to fish habitat and water quality from livestock grazing within the tributaries of the East Fork Salmon River, Slate Creek, French-Spring, and Sullivan-Clayton subwatersheds. The Upper East Fork Salmon and French-Spring subwatersheds are the priorities.	
Soil, Water, Riparian, and Aquatic Resources	Objective	Protect spawning and rearing areas within streams and rivers during critical spawning and incubation periods. The Upper East Fork Salmon subwatershed is the priority.	0331: Maintain spawning and rearing areas during critical spawning and incubation periods. The Muley-Elk, Beaver-Peach, and Upper East Fork Salmon subwatersheds are the priorities.	
Botanical	Objective	Manage fire suppression tactics, livestock grazing, mining activities, recreational stock use, dispersed camping, firewood collection for personal use, or trail construction and maintenance to minimize impacts to whitebark pine.	0351: Consider the impacts to whitebark pine from suppression of high-elevation fires when developing Fire Management Plans and strategies. (Modified as part of the 2012 Forest Plan amendment)	

MPC/ Resource Area	Direction	Wilderness Management Plan	Management Direction Description – 03	Management Direction Description – 04
Recreation	Objective	Manage dispersed campsites and recreation activities to prevent them from expanding or deteriorating beyond a point where impacts to riparian and aquatic resources cannot be effectively addressed.	0338: Manage dispersed campsites along the primary recreation corridors of the Salmon and East Fork Salmon Rivers, and backcountry lakes, to prevent them from expanding or deteriorating beyond a point where impacts to riparian and aquatic resources cannot be effectively addressed.	
Recreation	Objective	Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.	0365: Rehabilitate or physically barrier roads or routes that are closed to vehicle or ORV use. Barriers are to be rustic in design and appearance.	0461: Physically close or barrier roads or routes that are closed to vehicle or ORV use. Barriers are to be rustic in design and appearance.
	Standard	Manage winter recreation to minimize conflict with high elevation wildlife species, including mountain goats and wolverine.	0375: Restrict or modify winter recreation activities where conflicts exist with mountain goats and/or wolverine.	0471: Restrict or modify winter recreation activities where conflicts exist with mountain goats and/or wolverine.
	Standard	Prohibit constructing new trails, unless determined to be the minimum necessary to protect wilderness character.	0306: Do not construct new trails within trail-less areas of the Boulder/White Cloud recommended wilderness area, unless trails are determined to be necessary to prevent resource damage.	0406: Trail-less areas within the Boulder/White Cloud recommended wilderness area will remain trail-less, unless trails are determined to be necessary to prevent resource damage.
Fire	Objective	Identify areas where lightning caused wildfires can restore or maintain natural vegetative conditions; account for spatial and temporal changes in vegetation and fuels that affect the relative risk of wildfire impacting urban interface and other fire-affected values both within and outside of wilderness.	03117: Identify areas appropriate for Wildland Fire. Use wildland fire to restore or maintain desired vegetative conditions and to reduce fuel loadings. (Modified as part of the 2012 Forest Plan amendment)	04119: Identify areas appropriate for Wildland Fire. Use wildland fire to restore or maintain desired vegetative conditions and to reduce fuel loadings except in Sun Valley-Trail, Elkhorn Creek, Lake Creek, Eagle Creek, Fox-Leroux, Adams-Big Wood, Triumph-Milligan, Easley-Headquarters outside Sawtooth NRA boundary, east portion Barr Gulch-Rooks, Warfield-West Fork Warm Springs, Greenhorn Creek, Deer-Quigley, Wolfstone-North Fork Deer Subwatersheds. (Modified as part of the 2012 Forest Plan amendment)

MPC/ Resource Area	Direction	Wilderness Management Plan	Management Direction Description – 03	Management Direction Description – 04
Fire	Guideline	Coordinate across agencies and with wilderness specialists for FS and BLM, and other adjacent landowners, as appropriate, to develop compatible wildland fire management strategies.	Objective 03119: Coordinate with adjacent land managers to develop compatible wildland fire suppression strategies and coordinate plans for wildland fire management (Modified as part of the 2012 Forest Plan amendment)	Guideline 04121: Coordinate with adjacent land managers to develop compatible wildland fire suppression strategies and coordinate plans for wildland fire management (Modified as part of the 2012 Forest Plan amendment)
Range	Objective	Provide for high-quality mountain goat and bighorn sheep habitat by reducing summer and fall forage competition between domestic livestock where allotments overlap mountain goat and bighorn sheep habitat.	Objective 0359: Provide high-quality mountain goat forage by reducing summer and fall forage competition between domestic livestock where allotments overlap mountain goat habitat.	Objective 0454: Provide high-quality mountain goat forage by minimizing or reducing summer and fall forage competition between domestic sheep in the tributaries to the North Fork Big Wood River, Baker Creek, Prairie Creek, Trail Creek, and Owl Creek.
Range	Standard	For FS-administered allotments, livestock fences must provide for big-game passage.	03110: Livestock fences must provide for big-game passage.	
	Standard	For FS-administered allotments, forage utilization for riparian areas will not exceed 30% use of most palatable forage species or must retain a minimum 6-inch stubble height of hydric greenline species.	03109: Forage utilization for riparian areas will not exceed 30% use of most palatable forage species or must retain a minimum 6-inch stubble height of hydric greenline species.	

MPC/ Resource Area	Direction	Wilderness Management Plan	Management Direction Description – 03	Management Direction Description – 04
Education	Objective	Provide educational information on areas that are susceptible to weed invasion and measures to help prevent non-native, invasive plant establishment and spread.		Objective 0469: Evaluate and incorporate methods to help prevent weed establishment and spread from recreation and trail use in the Fox-Leroux and Sun Valley-Trail subwatersheds. Methods to consider include annual weed inspection and treatment of trailheads and other high-use areas; and posting educational notices in these areas to inform the public of areas that are susceptible to weed invasion and measures they can take to help prevent weed establishment and spread.
	Objective	Enhance public awareness and support through educational programs about the role of fire in the ecosystem and fire's role in maintaining wilderness character.	0345: Enhance public awareness of natural processes, including fire regimes and insects and disease, through interpretive and education programs.	
	Objective	Coordinate with tribal communities and others to provide public interpretation of American Indian sites.	Objective 0393: Coordinate with tribal communities and others to provide public interpretation of American Indian sites.	

**Hemingway-Boulders
and
Cecil D. Andrus-White Clouds
Wilderness Management Plan Environmental Assessment**

**Sawtooth National Forest, Sawtooth National Recreation Area
BLM, Idaho Falls District, Challis Field Office**

August 21, 2018



1. Introduction

Section 101 of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act designated 158,767 acres within Blaine and Custer counties, Idaho, as the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. The designating legislation requires the United States Department of Agriculture Forest Service and United States Department of Interior Bureau of Land Management (BLM) to manage the wilderness areas in accordance with the Wilderness Act.

The introduction to the *Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness Management Plan* (WMP; USDA Forest Service and BLM 2017) for these wilderness areas provides a detailed Purpose and Need for the Proposed Action and additional background information for the wilderness areas. The wilderness management direction described in the WMP forms the Proposed Action analyzed in this environmental assessment (EA).

1.1. Scope of the Wilderness Management Plan

Planning for wilderness involves translating the Wilderness Act, enabling legislation, agency policy, and regulations into a WMP. A WMP provides direction for a specific area and guides the preservation, management, and use of the wilderness to ensure that wilderness is unimpaired for future use and enjoyment as wilderness.

The WMP provides the primary management direction for the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness. Given their proximity, comparable natural resources, similar broad management issues, and administrative jurisdiction, incorporating the administration of these two areas into a single plan is appropriate. This WMP was jointly prepared by the Forest Service and BLM. Each agency has jurisdictional authority for separate portions of the Cecil D. Andrus-White Clouds Wilderness, whereas the Hemingway-Boulders is entirely managed by the Forest Service.

The WMP contains comprehensive descriptions of the wilderness areas and proposed management direction relating to specific resources. It defines an acceptable range of desired resource and social conditions by identifying zones. An EA will subsequently follow the WMP to describe and analyze potential impacts relating to proposed management direction and alternatives.

The WMP does not repeat guidance already contained in existing laws and policies (e.g., the Wilderness Act, Endangered Species Act (ESA), or Clean Water Act and existing federal regulations). It does not describe the methods, the “how to,” or the schedule of implementing the direction, nor does it describe the day-to-day or operational actions to be carried out when managing the wildernesses. The rate of implementation and potential management activities depend on the annual budgeting process. A Minimum Requirement Analysis (MRA) and National Environmental Policy Act (NEPA) analysis will be conducted to support management decisions made at the site-specific level. All actions are supplemental to and will be consistent with wilderness laws, regulations, and policies, which must be further consulted in the event of unforeseen issues.

1.2. Purpose of and Need of the Wilderness Management Plan

The purpose of a WMP is to provide management direction for preserving wilderness character by identifying the conditions and opportunities that will be managed for within wilderness, creating specific standards and guidelines for managing wilderness resources and activities. The Wilderness Act (Section 4) requires that “... each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area.” Although wilderness character is a

complex idea and is not explicitly defined in the Wilderness Act, the qualities of wilderness character are described as follows (Landres et al. 2015):

- **Untrammeled**—Area is unhindered and free from intentional actions of modern human control or manipulation.
- **Natural**—Area appears to have been primarily affected by the forces of nature and are substantially free from the effects of modern civilization.
- **Undeveloped**—Area is essentially without permanent improvements or the sights and sounds of modern human occupation.
- **Outstanding opportunities for solitude or a primitive and unconfined type of recreation**—Area provides outstanding opportunities for recreation in an environment that is relatively free from the encumbrances of modern society and for the experience of the benefits and inspiration derived from self-reliance, self-discovery, physical and mental challenge, and freedom from societal obligations.
- **Other Features of Value**—Area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. Though not required of any wilderness, where they are present, they are part of that area's wilderness character and must be protected as rigorously as any of the other four required qualities.

The need for the Proposed Action stems from the signing of Public Law 114-46, which changed the management direction of these areas. For the Forest Service portions of the two wilderness areas, the change was from recommended wilderness to designated wilderness. The BLM portion of the Cecil D. Andrus-White Clouds Wilderness was previously managed as the Boulder Creek Wilderness Study Area (WSA).

Additionally, as directed by the Sawtooth National Recreation Area and Jerry Peak Wilderness Act, "Not later than 3 years after the date of enactment of this Act, the Secretary of Agriculture and the Secretary of Interior shall collaboratively develop WMPs for the wilderness areas."

1.3. Decision to be Made

Based on the analysis herein, the Forest Service and BLM will decide whether to manage the wilderness area solely according to legislative and regulatory requirements, or whether to implement a WMP that provides additional direction to manage approved uses while ensuring adequate protection and preservation of resources and values, as well as providing mitigation for potential impacts to those resources and values.

The WMP provides the Forest Supervisor of the Sawtooth National Forest and the BLM District Manager with a basis on which to make an informed decision. Following review of the WMP and this EA, the Forest Supervisor and BLM District Manager, as appropriate, will decide to do one or more of the following:

1. Approve an amendment to the Sawtooth National Forest Land and Resource Management Plan (Forest Plan) as proposed in this document. This decision would result in a non-significant Forest Plan amendment.
2. Approve management proposals as presented in one of the alternatives or a combination of alternatives analyzed in this document.

3. Determine that the proposed actions or certain proposed actions in this document may cause significant impacts (as defined in 40 CFR 1508.27) that would require developing and approving an environmental impact statement (EIS) prior to implementation.

1.4. Public Involvement and Tribal Consultation

The scoping period for the draft WMP occurred November 21, 2016 through January 31, 2017 (71 days). In December, three open house meetings were offered to the public in Challis, Stanley, and Ketchum, Idaho. Several news outlets included the scoping period information, including News 8 and the *Idaho Mountain News*. The agencies also posted information on their respective webpages and social media. During this scoping period, 70 comment letters were received.

The Forest Service met with the Shoshone-Bannock Tribes in January and November 2017 and at regular technical meetings for updates.

The Forest Service attended Wings and Roots meetings with the Shoshone-Paiute Tribes throughout development of the WMP. The WMP was introduced to tribes in November 2016 at the Wings and Root Meeting, and the tribes were provided an overview of the proposed WMP in February 2017, with a follow-up in April 2017.

Coordination with Custer County Commissioners and the Custer County Natural Resource Advisory Committee occurred throughout the planning process. Representatives from each agency attended the monthly Custer County Commissioners meeting, with discussions regarding the planning process initiating shortly after the designation of the wildernesses. The Forest Service and BLM provided the Commissioners with a briefing on the WMP on November 18, 2016, prior to the scoping period.

The Forest Service also provided Blaine County Commissioners with updates regarding the planning process. During the scoping period, Forest Service and BLM staff provided a briefing to the Commissioners on January 3, 2017.

The Forest Service and BLM met with Idaho Department of Fish and Game during the scoping period on December 7, 2016.

The 30-day opportunity to comment on the proposed WMP (per 36 CFR 218, Subparts A and B) occurred October 27 through November 27, 2017, and included public meetings in Mackay, Challis, Stanley, and Ketchum. A legal notice was issued in the *Times News*, the paper of record on October 27, 2017. During this time, 33 parties submitted comments.

Additional coordination between the agencies and the Custer County Commissioners occurred on August 8, 2017, to discuss the wilderness plan process, and October 17, 2017, prior to the start of the comment period.

The agencies provided a monthly newsletter, beginning in October 2016, via email to stakeholders to provide regular planning updates.

1.5. Issues

Input was solicited from Forest Service and BLM staff and through public scoping opportunities where issues were identified and discussed. The issues have been categorized into two types: 1) key issues and 2) issues not analyzed in detail.

Issues serve to highlight effects or unintended consequences that may occur from the Proposed Action and alternatives. Issues are analyzed in detail in the EA. The Forest Service and BLM identified one primary topic raised during scoping: WMP strategies may affect wilderness character. As described under the Purpose and Need above, wilderness character encompasses several qualities—untrammelled, natural, undeveloped, opportunities for solitude, or a primitive and unconfined type of recreation—and may include other features of value.

1.5.1. Issues Not Analyzed in Detail

The following issues were not analyzed in detail because they are outside the scope of this project; are already decided by law, regulation, policy, Forest Plan/RMP, or other higher-level decision; are irrelevant to the decision to be made; or are conjectural and not supported by factual evidence or scientific evidence.

- **Wilderness Designation**—The wilderness areas were designated by Congress through the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act. Designation of wilderness is not under review within the WMP or this EA. The boundaries of the wilderness were set through passage of the Act and are not open to review through this planning process.
- **Prescribed Fire**—Consideration of prescribed fire is guided by BLM and Forest Service wilderness policy. No current proposals exist to implement prescribed fire in the wildernesses.
- **Predator Control**—BLM and Forest Service wilderness policy allow for predator control programs on a case-by-case basis for certain reasons. Control methods are designed to focus on individual animals.
- **Fish Stocking**—In cooperation with the State of Idaho, fish stocking is guided by BLM and Forest Service wilderness policy and guidance of the Association of Fish and Wildlife Agencies (AFWA) agreement.
- **Dark Sky Preservation**—This region is located within a high-quality dark sky region. The WMP recognizes night skies as a value within the wilderness. No proposed actions within the WMP would affect night sky quality.
- **Hunting and Fishing**—Hunting and fishing regulations are written and enforced by the State of Idaho.
- **Trapping**—Trapping is an acceptable use of wilderness, subject to federal and State laws and regulations.
- **Livestock Grazing and Allotment Management Plans**—Grazing of livestock, where established prior to August 7, 2015, shall be administered in accordance with Section 4(d)(4) of the Wilderness Act; Section 102(e) of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act; the grazing guidelines in House Report 96-617; and Appendix A of House Report 101-405.
 - Further, Section 102(e)(2) of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act allows for voluntary donation (partial or whole) of grazing permits and leases leading to termination of the permit or lease. This process is outside the scope of the WMP.
- **Fort Bridger Treaty of July 3, 1868**—The Shoshone-Bannock Tribes have ancestral treaty rights to uses of the Sawtooth National Forest, including the wilderness areas. The relationship of the United States government with American Indian tribes is based on legal agreements between sovereign nations. The Fort Bridger Treaty of July 3, 1868, reserved the hunting, fishing, and gathering rights of tribal members on “all unoccupied lands of the United States so long as game is present thereon.” This right applies to all federal lands administered by the BLM and Forest Service.

- **Travel Management**—Transportation and travel management of routes and designations outside of designated wilderness are outside the scope of this plan and will be addressed through separate travel management planning.
- **Recommended Wilderness**—Those portions of recommended wilderness that were not designated as wilderness in the Sawtooth National Recreation Area and Jerry Peak Wilderness Addition Act will continue to be managed as recommended wilderness as identified in the Forest Plan until they are reevaluated through the Forest Planning process.
- **Socioeconomics of Wilderness Designation**—Various parties have expressed concerns regarding the economic impact of the wilderness designation; however, these two wildernesses were designated in 2015 by Congress with P.L. 114-46, and analysis of the wilderness designation is not within the scope of this EA. Analysis of the impacts of the actions presented in the alternatives are provided below.
- **Dogs on Leash**—Scoping comments suggested requiring dogs on leash within the wildernesses to minimize disturbance to wildlife, specifically big game. However, Idaho Statute (Section 36 1101) protects big game from harassment by dogs.

2. Alternatives

This section presents three alternatives in comparative form, defining the differences between each alternative and providing a clear basis for the choice between options by the decision-maker. The project alternatives described here 1) meet the Purpose and Need of the project; 2) address issues raised; and 3) meet (or modify, in the case of the Forest Plan amendment) the direction established in the Forest Plan and the Challis Resource Management Plan (RMP). See Table 6 for a comparison of the alternatives.

This section includes the standards and guidelines from the WMP that are not already established by law (e.g., the Wilderness Act) or policy. Some of the direction is from Agency-specific policy but is included here if it would be new direction for the other Agency, which is not explicitly stated in that Agency's policy direction.

2.1. Alternatives Considered but Eliminated from Detailed Analysis

One alternative, the No Action Alternative, was considered. An alternative that does not protect wilderness character as required by the Wilderness Act and the enabling legislation may not be fully considered. In other words, a “no management alternative” is not viable.

This alternative was eliminated from detailed analysis because, a true No Action Alternative would not comply with law or policy because the Forest Service and BLM are required to manage designated wilderness according to standards that were not in effect prior to the designation. Further, enabling legislation requires the agencies develop “wilderness management plans for the wilderness areas” (P.L. 114-46).

2.2. Management Direction Common to all Alternatives

The following management actions are expressly authorized in the Sawtooth Forest Plan and are deemed necessary for the proper management of the designated wilderness areas. As such, this management direction is incorporated into all alternatives.

2.2.1. Sawtooth National Recreation Area General Management

- Manage lands to ensure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the associated recreational values in accordance with Public Law 92-400.
- Management, utilization, and disposal of natural resources on federally owned lands (such as timber, grazing, and mineral resources) shall be allowed only insofar as their utilization does not substantially impair achievement of the purposes for which the recreation area was established. (As a management approach, “Substantial Impairment” is defined as that level of disturbance of the values of the Sawtooth National Recreation Area (NRA) that is incompatible with the standards and guidelines of the Forest Plan. The proposed activities shall be evaluated as to: 1) the period of impact; 2) the area affected; and 3) the importance of the impact on the Sawtooth NRA values. Use process guidance in Appendix I of the Forest Plan to assist in determining compliance with this standard.)

2.2.2. Eligible Wild and Scenic Rivers

- Manage the eligible Wild and Scenic River corridors to their assigned classification standards and preserve their outstandingly remarkable values (ORVs) and free-flowing status until the rivers undergo a suitability study and the study finds them suitable for designation by Congress or releases them from further consideration as Wild and Scenic Rivers.
- The full range of fire suppression strategies may be used to manage wildfires. Emphasize strategies and tactics that minimize the impacts of suppression activities on the river classifications, ORVs, and wilderness character.
- Wildland fire (prescribed fire and/or wildfire) may be used as management tools in any river corridor as long as ORVs and wilderness character are maintained within the corridor.

2.2.3. Recreation Resources

- Prohibit constructing new trails unless determined to be the minimum necessary to protect wilderness character.

2.2.4. Rangeland Resources

- For FS-administered allotments, livestock fences must provide for big-game passage.
- For FS-administered allotments, forage utilization for riparian areas will not exceed 30% use of most palatable forage species or must retain a minimum 6-inch stubble height of hydric greenline species.

2.2.5. Forest Service–specific Direction

The following direction would apply to the Forest Service-managed portions of the two wildernesses under all three alternatives based on the Forest Plan or Forest Service policy. This direction would be new for the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness, and is proposed for Alternatives A and B.

Wilderness

- Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.

Recreation Resources

- Manage winter recreation to minimize conflict with high-elevation wildlife species, including mountain goats and wolverine.

Rangeland Resources

- Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation.

2.3. Management Direction Common to Alternatives A and B

Much of the Proposed Action is common to Alternatives A and B. Key distinctions between Alternatives A and B include the direction regarding pack goat management to minimize risk of contact with bighorn sheep and recreation management (e.g. group sizes, campfires, stock use, and permit system).

2.3.1. *Wilderness*

- Use locally sourced native seed or plants where reseeding or replanting is determined necessary.
- Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.
- Assess impacts and determine if management actions are needed to maintain wilderness character (see “Wilderness Monitoring” section) if campsites and travel encounters increase by 10% or more over two reporting periods.
- Assess impacts and determine if management actions are needed to maintain wilderness character if recreation site condition class increases by 5% or more over two reporting periods (see “Wilderness Monitoring” section).
- Assess impacts and determine if management actions are needed to maintain wilderness character if total miles of user-developed routes (i.e., unauthorized trails) increase by 3% or more over two reporting periods (see “Wilderness Monitoring” section).
- Ensure management activities are consistent with wilderness zone descriptions.
- Use natural openings for helicopter landing areas when needed for fire or emergency operations to avoid impacts to wilderness character and minimize intrusions.

2.3.2. *Wildlife Resources*

- Continue to work cooperatively with IDFG to reduce the risk of disease transmission or other stressors between bighorn sheep and domestic animals.

2.3.3. *Recreation Resources*

- Prohibit shortcutting trail switchbacks on foot or with recreational stock.
- Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-up sites where topography does not allow for tethering more than the 200 feet from lakes, streams, and springs.
- Limit tying of recreational stock to live trees to a maximum of one hour.

- Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs.
- Require human waste to be buried and covered, at least 200 feet from water, campsites, and trails; or packed out.
- Manage winter recreation to minimize conflict with high elevation wildlife species including mountain goats and wolverine.
- Remove the following trails from the Forest Service Trail inventory.
 - Cecil D. Andrus-White Clouds Wilderness:
 - NFS trail 674—Above O'Caulkins Lake to Warm Springs Creek (NFS trail 671 junction; 3.9 miles)
 - NFS trail 684—Wickiup Creek (6.7 miles)
 - Hemingway-Boulders Wilderness:
 - NFS trail 113—The upper 5.2 miles of the South Fork of the East Fork of the Salmon River
- Prevent human/wildlife encounters by emphasizing proper camping techniques and food storage and containment.
- Discourage off-trail route marking and remove user-created route markers (e.g., stacked rocks, flagging).
- Encourage use of no trace fires (i.e. use of fire pans or fire blankets).

Commercial Services

- Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g, and BLM H-2930-1, BLM 6340 B.2.(i).)
- Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas.
- Ensure operating plans for priority use and temporary use outfitting and guiding permits direct outfitters to model appropriate wilderness practices and incorporate awareness of wilderness values in their interaction with clients and others.

2.3.4. Scenic Environment

- Build facilities and structures, when needed for resource protection, out of natural materials that blend into the natural environment.
- Do not consider visual conditions changed by natural events and processes as detrimental to scenic qualities.

2.3.5. Heritage, Archaeological and Cultural Resources

- Develop a management strategy that includes, but is not limited to, education/interpretation or signage outside of wilderness, or natural barriers to prevent additional damage if monitoring reveals that damage is occurring to cultural, archaeological, or historic resources. The wilderness specialist and archaeologist, in consultation with sovereign tribal governments and the State Historic Preservation Officer, will work together to develop the management strategy.

2.3.6. Rangeland Resources

- Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho with priority dates predating the wilderness designation.

2.3.7. Fire Management

- Determine actions for each wildland fire that are consistent with protecting wilderness character while providing for firefighter and public safety and considering the impacts to private property and developed facilities in surrounding areas.
- Avoid locating temporary wildfire management support facilities (e.g., spike camps, landing areas) in wilderness. When considered necessary, all efforts will be made to use areas with pre-existing impact outside of Zone 1. Responder safety will be the first consideration when making this determination.
- Minimize suppression impacts to wilderness character by using Minimum Impact Suppression Tactics (MIST) and assigning Resource Advisor(s) with knowledge, training, and/or experience in wilderness management. Return disturbance caused by suppression actions to as natural a condition as possible.

2.3.8. Lands and Special Uses

- Consider the direction for each zone when evaluating a proposal; zone direction may influence where and how approval is granted.

2.3.9. Wilderness Education and Interpretation

- Interpretive information may be included on trailhead information signs or communicated elsewhere outside of wilderness but will not be located on signs in wilderness.
- Emphasize a proactive approach to wilderness education. Build partnerships and relationships with organization camps, group organizations, businesses, school and university programs, permittees, permanent and seasonal staff, and other users to integrate Leave No Trace and wilderness ethics into their operations.
- Communicate rules and regulations primarily outside of wilderness.

2.3.10. Search and Rescue

- Use the flow chart in Appendix 1 for approval of motorized and mechanized emergency response.
- Use natural terrain features for helicopter landing areas. Care should be taken that vehicles used in search and rescue (SAR) operations do not transport invasive species or cause unacceptable resource or social impacts. Immediately address any resource damage resulting from SAR operations.

2.3.11. Management Zones

- Management zones are established as indicated in Table 5:

Table 5. Management Zones

Cecil D. Andrus-White Clouds	Hemingway-Boulders
96% Zone 1	99% Zone 1
3% Zone 2	<1% Zone 2
<1% Zone 3	<1% Zone 3
<1% Zone 4	<1% Zone 4

2.4. Management Direction Common to Alternatives A and C

2.4.1. Recreation Resources

- Maintain the voluntary registration system.

2.5. Alternative A—Proposed Action

The Proposed Action is described in detail in the WMP. Alternative A proposes management actions to address issues identified above and protect wilderness character. This section details direction specific to Alternative A.

2.5.1. Wildlife Resources

- Require the following measures from the North American Packgoat Association to minimize contact between bighorn sheep and domestic goats used for packing:
 - All pack goats will be on leads or have leads attached to their collar or halter at all times.
 - All pack goats will be tethered at night within 30 feet of humans.
 - If bighorn sheep are observed within 100 yards of a potential camping area, pack goat users will take all reasonable measures to move their campsite to a different area. Hazing techniques may be used to deter bighorn sheep from moving closer to campsites if necessary.
 - Pack goat numbers will be limited to a maximum of three (3) pack goats per person, and a maximum of nine (9) pack goats per group.
 - When bighorn sheep are using trails for travel pack goat users will move off the trail 100 yards. If that distance is not attainable, the pack goat user will travel back along the trail away from the bighorn sheep and exit the trail when the 100-yard distance can be reached. Pack goat users will stay off the trail until bighorn sheep have passed. If visibility is limited to less than 100 yards up trail, a pack goat user will go to the trail and observe for bighorn sheep before continuing with pack goats.
 - When accessing browsing areas and water, a pack goat user will check for the presence of bighorn sheep before allowing access for pack goats. Whenever possible, water access will be limited to areas of unlikely bighorn sheep use.

- In event that direct contact of a pack goat and a bighorn sheep is observed, the location and as much of a description as is possible of the sheep and incident will be written, photographed if possible and reported to the appropriate agency as soon as reasonably possible.
- If any pack goat becomes lost, missing or separated from the owner and herd every effort will be exhausted to locate and recover the lost pack goat. If the owner is unable to locate and recover the lost pack goat, contact the Sawtooth NRA by telephone immediately. A full disclosure of all available information will be provided including: the last known location (GPS coordinates, legal description, geographic location, name or number of trail or trailhead), the circumstances that resulted in it becoming lost, a description of the pack goat, and any equipment that it was carrying
- Pack goats are prohibited within Pack Goat Exclusion Area. The boundary was modified to provide clarity for pack goat users by following trails, and natural geographic features, such as ridgelines and drainages.

2.5.2. Recreation Resources

- Limit group size to a maximum of 12 people. (See exception for Native American tribes in the Tribal Rights and Interests section.)
- Limit the combined number of recreational stock in one group to 14 head of stock.
- Only allow campfires below 8,800 feet elevation and within 200 yards of Walker Lake, Island Lake, Upper and Lower Chamberlain Lakes (9,477 and 9,197 feet), and Boorn Lakes.
- Prohibit recreational equine stock use within the following drainages: Slickenslide Creek above Quie Lake; Boulder Chain Lakes Creek above Lodgepole Lake; Gunsight Creek; Bighorn Creek; and Big Boulder Lakes, excluding Walker and Island Lakes.

2.6. Alternative B—Natural-Focus

Alternative B (Natural-Focus Alternative) stresses protecting the natural and untrammeled qualities of wilderness character with measures aimed at protecting wildlife, vegetation, soils and opportunities for solitude by applying restrictions on visitor use, and recreation. This section details the direction specific to Alternative B.

2.6.1. Wildlife Resources

- Pack goats are prohibited.

2.6.2. Recreation

- Limit group size to a maximum of 8 persons in Zone 1, and a maximum of 12 persons in Zones 2, 3, and 4. (See exception for Native American tribes in the Tribal Rights and Interests section.)
- Limit the combined number of pack in saddle stock in one group to a maximum of 10 animals in Zone 1, and a maximum of 14 animals in Zones 2, 3, and 4.
- Only allow campfires in Zones 3 and 4.
- Prohibit recreational equine stock use, within the following drainages: Slickenslide Creek, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Walker and Island Lakes.

- Establish a mandatory permit system (free, self-issue) to educate users of regulations, and determine use levels and patterns.
- Establish a mandatory permit system obtainable from a FS/BLM office for groups of 8 or more people or with recreational stock that will remain overnight.

2.7. Alternative C—Minimal Management

Alternative C (Minimal Management) represents the least restrictive direction for managing the wilderness areas. Requirements or restrictions imposed in this alternative are generally those that are specifically mandated by law (e.g., Wilderness Act, Sawtooth NRA Additions Act, Sawtooth NRA Act, and others); policy; or existing Forest Plan direction. Direction from Management Areas (MA) 03 and 04, East Fork Salmon River/White Cloud and Big Wood River, respectively, would continue to apply to the NFS portions of the two wilderness areas, if in conformance with the Wilderness Act, the Sawtooth NRA Additions Act, and other law and policy. However, this direction would be new on the BLM-managed portion. Conversely, there is direction that would also be new on the NFS portions of the wilderness areas. The following direction is specific to Alternative C.

2.7.1. Recreation Resources

- Trails are maintained at the “time of designation” level.

2.7.2. Wilderness Education and Interpretation

- Educate users of pack goats on measures for reducing the risk of disease transmission with bighorn sheep, as recommended by the North American Packgoat Association.

2.7.3. Management Zones

- Zones are not established. Recreation resources would continue to be managed under the Recreation Opportunity Spectrum (ROS) on the NFS portions only. The ROS class would be changed to primitive on the NFS portions.

2.7.4. Forest Service—specific Direction

The following direction would apply under Alternative C to the NFS portions of the two wildernesses. This direction would be new for the BLM-managed portion.

Recreation Resources

- The following are prohibited:
 - Having greater than 20 persons in a group.
 - Being in the area with a combined number of recreational stock in excess of 25 animals.
 - Shortcutting trail switchbacks on foot or with recreational stock.
 - Building, maintaining, attending, or using campfires within 200 yards of the following lakes: Cirque, Cove, Sapphire, Sheep, Slide, Tin Cup, Gunsight, Four Lakes Basin, Scree, Shallow, Castle, and Chamberlain 9849.
 - Tethering recreational stock within 100 feet of springs, lakes, or streams.

- Tying recreational stock to live trees for periods longer than one hour.

Fire Management

- Avoid locating temporary wildfire management support (e.g., spike camps, landing areas) in wilderness.

2.7.5. Bureau of Land Management–specific Direction

The following direction would apply under Alternative C to the BLM-managed portions of the Cecil D. Andrus-White Clouds Wilderness. This direction would be new for the NFS portions of the two wildernesses as Forest Service policy does not explicitly include this direction.

Fire Management

- Suppression impacts to wilderness character should be minimized by using MIST and assigning Resource Advisor(s) with knowledge, training and/or experience in wilderness management.
Disturbance caused by suppression actions should be returned to as natural a condition as possible.

Table 6 presents a comparison of the standards and guidelines for each alternative.

Table 6. Comparison of alternatives

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Wilderness			
Standards	Use locally sourced native seed or plants where reseeding or replanting is determined necessary.	Same as A	No direction
Standard	Manage vehicle access points to prevent unauthorized vehicle use by posting appropriate boundary signage and blocking or rehabilitating unauthorized routes.	Same as A	Existing Forest Plan direction; applies regardless of alternative. This direction would be new for BLM.
Standards	Assess impacts and determine if management actions are needed to maintain wilderness character (see "Wilderness Monitoring" section) if campsites and travel encounters increase by 10% or more over two reporting periods.	Same as A	Index of Encounters per FS Technical Guide; 10% change in the index value indicates a change in trend. (Applies across both wilderness areas.)
Standards	Assess impacts and determine if management actions are needed to maintain wilderness character if recreation site condition class increases by 5% or more over two reporting periods (see "Wilderness Monitoring" section).	Same as A	Index of Recreation Sites within Primary Use Areas per FS Technical Guide; 5% change in the index value indicates a change in trend. (Applies across both wilderness areas.)
Standards	Assess impacts and determine if management actions are needed to maintain wilderness character if total miles of user-developed routes (i.e., unauthorized trails) increase by 3% or more over two reporting periods (see "Wilderness Monitoring" section).	Same as A	Miles of Unauthorized Trails per FS Technical Guide; 3% or greater change in number of miles indicates a change in trend. (Applies across both wilderness areas.)
Standard	Ensure management activities are consistent with wilderness zone descriptions.	Same as A	No direction
Guideline	Use natural openings for helicopter landing areas when needed for fire or emergency operations to avoid impacts to wilderness character and minimize intrusions.	Same as A	No direction

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Wildlife Resources			
Standard	Prohibit pack goats within Pack Goat Exclusion Area, as described in Figure 4 of the WMP. The boundary was modified to provide clarity for pack goat users by following trails and natural geographic features, such as ridgelines and drainages.	Pack goats are prohibited.	No direction

Standard	<p>Require the following measures from the North American Packgoat Association to minimize contact between bighorn sheep and domestic goats used for packing:</p> <ul style="list-style-type: none"> • All pack goats will be on leads or have leads attached to their collar or halter at all times. • All pack goats will be tethered at night within 30 feet of humans. • If bighorn sheep are observed within 100 yards of a potential camping area, pack goat users will take all reasonable measures to move their campsite to a different area. Hazing techniques may be used to deter bighorn sheep from moving closer to campsites if necessary. • Pack goat numbers will be limited to a maximum of three (3) pack goats per person, and a maximum of nine (9) pack goats per group. • When bighorn sheep are using trails for travel pack goat users will move off the trail 100 yards. If that distance is not attainable, the pack goat user will travel back along the trail away from the bighorn sheep and exit the trail when the 100-yard distance can be reached. Pack goat users will stay off the trail until bighorn sheep have passed. If visibility is limited to less than 100 yards up trail, a pack goat user will go to the trail and observe for bighorn sheep before continuing with pack goats. • When accessing browsing areas and water, a pack goat user will check for the presence of bighorn sheep before allowing access for pack goats. Whenever possible, water access will be limited to areas of unlikely bighorn sheep use. • In event that direct contact of a pack goat and a bighorn sheep is observed, the location and as much of a description as is possible of the sheep and incident will be written, photographed if possible and reported to the appropriate agency as soon as reasonably possible. 	Pack goat measures are not applicable, as pack goat are prohibited under the following standard.	No direction
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Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
	<ul style="list-style-type: none"> If any pack goat becomes lost, missing or separated from the owner and herd every effort will be exhausted to locate and recover the lost pack goat. If the owner is unable to locate and recover the lost pack goat, contact the Sawtooth NRA by telephone immediately. A full disclosure of all available information will be provided including: the last known location (GPS coordinates, legal description, geographic location, name or number of trail or trailhead), the circumstances that resulted in it becoming lost, a description of the pack goat, and any equipment that it was carrying. 		
Standard	Continue to work cooperatively with IDFG to reduce the risk of disease transmission or other stressors between bighorn sheep and domestic animals.	Same as A	No direction
Recreation Resources			
Standard	Limit group size to a maximum of 12 people. (See exception for Native American tribes in the Tribal Rights and Interests section.)	Limit group size to a maximum of 8 persons in Zone 1, and a maximum of 12 persons in Zones 2, 3, and 4. (See exception for Native American tribes in the Tribal Rights and Interests section.)	The following is prohibited: a) Having greater than 20 persons in a group. Existing Forest Plan direction; new direction for BLM.
Standard	Limit the combined number of recreational stock in one group to 14 head of stock.	Limit the combined number of recreational stock in one group to a maximum of 10 animals in Zone 1, and a maximum of 14 animals in Zones 2, 3, and 4.	The following is prohibited: b) Being in the area with a combined number of recreational stock in excess of 25 animals. Existing Forest Plan direction; new direction for BLM.
Standard	Prohibit shortcutting trail switchbacks on foot or with recreational stock.	Same as A	The following is prohibited: c) Shortcutting trail switchbacks on foot or with recreational stock. Existing Forest Plan direction; new direction for BLM.

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Standard	Only allow campfires below 8,800 feet elevation and within 200 yards of Walker Lake, Island Lake, Upper and Lower Chamberlain Lakes (9,477 and 9,197 feet), and Boorn Lakes	Campfires are only allowed in Zones 3 and 4.	The following is prohibited: d) Building, maintaining, attending, or using campfires within 200 yards of the following lakes: Cirque, Cove, Sapphire, Sheep, Slide, Tin Cup, Gunsight, Four Lakes Basin, Scree, Shallow, Castle, and Chamberlain 9849. Existing Forest Plan direction; not applicable on BLM portion.
Standard	Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-up sites where topography does not allow for tethering more than the 200 feet from lakes, streams, and springs.	Same as A	The following is prohibited: e) Tethering recreational stock within 100 feet of springs, lakes, or streams. Existing Forest Plan direction; new direction for BLM.
Standard	Limit tying recreational stock to live trees to a maximum of one hour.	Same as A	The following is prohibited: f) Tying recreational stock to live trees for periods longer than one hour. Existing Forest Plan direction; new direction for BLM.
Standard	Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs.	Same as A	No direction
Standard	Require human waste to be buried and covered, at least 200 feet from water, campsites, and trails; or packed out.	Same as A	No direction
Standard	Prohibit recreational equine stock use within the following drainages: Slickenslide Creek above Quiet Lake; Boulder Chain Lakes Creek above Lodgepole Lake; Gunsight Creek; Bighorn Creek; and Big Boulder Lakes, excluding Walker and Island Lakes.	Recreational equine stock use is prohibited within the following drainages: Slickenslide Creek, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Walker and Island Lakes.	No direction
Standard	Manage winter recreation to minimize conflict with high elevation wildlife species including mountain goats and wolverine.	Same as A	Existing Forest Plan direction; new direction for BLM.

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Standard	Remove the following trails from the Forest Service Trail inventory. <ul style="list-style-type: none"> Cecil D. Andrus-White Clouds Wilderness: Trail #674—Above O'Caulkins Lake to Warm Springs Creek (#671 junction; 3.9 miles); Trail #684—Wickiup Creek (6.7 miles); and Hemingway-Boulders Wilderness: Trail #113—the upper 5.2 miles of the South Fork of the East Fork of the Salmon River. 	Same as A	Trails are maintained at the “time of designation” level.
Standard	No direction	Establish a mandatory permit system for all users (free, self-issue) to educate users of regulations, and determine use levels and patterns.	No direction
Standard	No direction	Establish a mandatory permit system obtainable from a FS/BLM office for groups of eight or more people or with recreational stock that will remain overnight.	No direction
Guideline	Prevent human/wildlife encounters by emphasizing proper camping techniques and food storage and containment.	Same as A	No direction
Guideline	Discourage off-trail route marking and remove user-created route markers (e.g., stacked rocks, flagging).	Same as A	No direction
Guideline	Encourage use of no trace fires (i.e. use of fire pans or fire blankets).	Same as A	No direction
Guideline	Maintain the voluntary registration system.	No direction	Same as A
Guideline	Encourage use of temporary stock containment systems and require tree-saver devices to minimize tree damage.	Same as A	No direction

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Recreation—Commercial Services			
Standard	Approve only temporary structures and facilities for outfitter and guide operations necessary to meet the public need in a manner compatible with the wilderness environment. (Current direction may be found FSH 2709.14, Chapter 53.1c (3), FSM 2320.13g, and BLM H-2930-1, BLM 6340 B.2.(i).)	Same as A	Existing Forest Service policy; new direction for BLM.
Standard	Authorize assigned campsites for outfitters and guides in Zones 3 and 4 only and locate them to reduce conflicts with non-outfitted users and to protect sensitive areas.	Same as A	No direction
Standard	Ensure operating plans for priority use and temporary use outfitting and guiding permits direct outfitters to model appropriate wilderness practices and incorporate awareness of wilderness values in their interaction with clients and others.	Same as A	No direction
Scenic Environment			
Guideline	Build facilities and structures, when needed for resource protection, out of natural materials that blend into the natural environment.	Same as A	No direction
Guideline	Do not consider visual conditions changed by natural events and processes as detrimental to scenic qualities.	Same as A	No direction
Heritage, Archaeological and Cultural Resources			
Guideline	Develop a management strategy that includes, but is not limited to, education/interpretation or signage outside of wilderness, or natural barriers to prevent additional damage if monitoring reveals that damage is occurring to cultural, archaeological, or historic resources. The wilderness specialist and archaeologist, in consultation with sovereign tribal governments and the State Historic Preservation Officer, will work together to develop the management strategy.	Same as A	No direction; additional NEPA/MRA would be required for site-specific actions.

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Rangeland Resources			
Standard	Water use for irrigation to maintain livestock grazing operations will be in accordance with existing water rights issued by the State of Idaho, with priority dates predating the wilderness designation.	Same as A	Existing Forest Service policy; new direction for BLM.
Fire Management			
Guideline	Determine actions for each wildland fire that are consistent with protecting wilderness character while providing for firefighter and public safety and considering impacts to private property and developed facilities in surrounding areas.	Same as A	No direction.
Guideline	Avoid locating temporary wildfire management support facilities (e.g., spike camps, landing areas) in wilderness. When considered necessary, all efforts will be made to use areas with pre-existing impacts, outside of Zone 1. Responder safety will be the first consideration when making this determination.	Same as A	Avoid locating temporary wildfire management support (e.g., spike camps, landing areas) in wilderness. Existing Forest Service policy; new direction for BLM.
Guideline	Minimize suppression impacts to wilderness character by using MIST and assigning Resource Advisor(s) with knowledge, training, and/or experience in wilderness management. Return disturbance caused by suppression actions to as natural a condition as possible.	Same as A	Existing BLM policy; new direction for Forest Service.

Direction	Alt A—Proposed Action	Alt B—Natural-Focus	Alt C—Minimum Management
Lands and Special Uses			
Standard	Consider the direction for each zone when evaluating a proposal; zone direction may influence where and how approval is granted.	Same as A	No direction
Wilderness Education and Interpretation			
Standard	Interpretive information may be included on trailhead information signs or communicated elsewhere outside of wilderness but will not be located on signs in wilderness.	Same as A	No direction
Guideline	Emphasize a proactive approach to wilderness education. Build partnerships and relationships with organization camps, group organizations, businesses, school and university programs, permittees, permanent and seasonal staff, and other users to integrate Leave No Trace and wilderness ethics into their operations.	Same as A	No direction
Guideline	Communicate rules and regulations primarily outside of wilderness.	Same as A	No direction
Guideline	No direction.	Same as A	Educate users of pack goats on measures for reducing the risk of disease transmission with bighorn sheep, as recommended by the North American Packgoat Association.

Direction	Alt A—Proposed Action		Alt B—Natural-Focus	Alt C—Minimum Management
Search and Rescue				
Standard	Use the flow chart in Appendix 1 for approval of motorized and mechanized emergency response.		Same as A	No direction
Guidelines	Use natural terrain features for helicopter landing areas. Care should be taken that vehicles used in SAR operations do not transport invasive species or cause unacceptable resource or social impacts. Immediately address any resource damage resulting from SAR operations.		Same as A	No direction
Management Zones				
	Management zones are established:		Same as A	Zones are not established. Recreation resources would continue to be managed under the ROS. The ROS class would be changed to primitive on the Forest Service portions.
	Cecil D. Andrus-White Clouds: 96% Zone 1 3% Zone 2 <1% Zone 3 <1% Zone 4	Hemingway-Boulders: 99% Zone 1 <1% Zone 2 <1% Zone 3 <1% Zone 4		

2.8. Compliance with Laws, Regulations, Executive Orders, and State Statutes

Management actions contained in the WMP comply with requirements of the Wilderness Act, and the *Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act*, as well as other applicable laws, regulations, and executive orders.

2.8.1. Endangered Species Act

The ESA (16 USC 35 §§1531 et seq. 1988) provides for the protection and conservation of threatened and endangered plants and animal species. A project-specific ESA list was generated from the U.S. Fish and Wildlife Service (USFWS 2017) Information for Planning and Conservation web site (<http://ecos.fws.gov/ipac>) and is available in the project record. The current list identifies 1 threatened species (Canada lynx [*Lynx canadensis*]), 1 proposed species (wolverine [*Gulo gulo*]) and 1 candidate species (whitebark pine [*Pinus albicaulis*]) (USDI FWS 2017). All alternatives were assessed to determine their effects on threatened and endangered plant and animal species. (See section 3.4, “Wildlife,” and section 3.5, “Botanical Resources” of this EA.)

The following fish species currently listed as threatened on the Sawtooth NRA: spring/summer Chinook salmon, steelhead trout, and bull trout (Forest MIS species). In addition, Snake River sockeye salmon in the Salmon River are listed as endangered and the westslope cutthroat trout and Wood River sculpin are listed as a Region 4 Sensitive species. These species, with the exception of sockeye Salmon, occur or have critical habitat delineated within the wilderness areas. A BA and BE are currently being prepared. Preliminary determinations to ESA listed species, Sensitive species, and their critical habitat in or adjacent to the wilderness planning area is no effect.

No threatened or endangered plant species were identified on the project-specific ESA list; however, there is one candidate plant species, whitebark pine, on the list. The botany technical report and BE prepared for this project indicated that implementation of the Proposed Action would benefit whitebark pine.

2.8.2. Tribal Consultation

Tribal governments have a unique legal and political relationship with the United States government as reflected in the United States Constitution, treaties (including the Fort Bridger Treaty of 1868), statutes, court decisions, executive orders, and memoranda. The relationship imparts a duty on all federal agencies to consult, coordinate, and communicate with American Indian Tribes on a government-to-government basis. Because Indian Tribes can be affected by the policies and actions of the Forest Service and BLM in managing the lands and resources under its jurisdiction, the agencies have a duty to consult with them on matters affecting their interests. Because of this government-to-government relationship, efforts were made to involve local tribal governments and to solicit their input regarding the proposed action.

2.8.3. National Historic Preservation Act

The NHPA requires federal agencies to consider the effects of their activities and programs on historic properties. Federal activities and programs are defined as “undertakings” by the 36 CFR 800 regulations implementing NHPA Section 106. Historic properties are significant cultural resources included in, or eligible for inclusion in, the NRHP.

None of the action alternatives would be expected to have any direct or indirect effects on historically significant sites. Any of the action alternatives would be determined to have “No Adverse Effect” to historic resources. Concurrence from the Idaho State Historic Preservation Office (SHPO) will be obtained before a decision on this project is made. The cultural resource technical report is available in the project record.

2.8.4. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) decrees that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. “Take” is defined in the MBTA to include any attempt at hunting, pursuing, wounding, killing, possessing, or transporting, by any means or in any manner, any migratory bird, nest, egg, or part thereof. A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. The original intent of the MBTA was to put an end to the commercial trade in birds and their feathers, an activity that had wreaked havoc on the populations of many native bird species. On January 17, 2001, President William Clinton signed Executive Order (EO) 13186, directing executive departments and agencies to take certain actions to further implement the MBTA (FR Vol. 66, No. 11, January 17, 2001). The Bald and Golden Eagle Protection Act affords additional protection to all bald and golden eagles.

In direct response to the EO, the Forest Service and USFWS entered into a memorandum of understanding (MOU) to promote the conservation of migratory birds (USDA Forest Service and USDI FWS 2008). One of the steps outlined for the Forest Service in the MOU is applicable to this analysis: “Within the NEPA process, evaluate the effects of Agency actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors.” The Forest Service additionally agreed, to the extent practicable, to evaluate and balance benefits against adverse effects, to pursue opportunities to restore or enhance migratory bird habitat, and to consider approaches for minimizing take that are incidental to otherwise lawful activities.

All action alternatives proposed would comply with the MBTA” In addition, this project complies with EO 13186 because the analysis meets agency obligations as defined in the MOU (USDA Forest Service and USDI FWS 2008) designed to complement EO 13186. Migratory bird species are analyzed and discussed in the wildlife technical report, with supporting information provided in the project record. If new requirements or direction result from subsequent interagency MOUs pursuant to EO 13186, this project would be reevaluated to ensure consistency.

2.8.5. Environmental Justice and Socioeconomics

In accordance with EO 12898, all action alternatives were assessed to determine whether they would have disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority or low-income human populations. The percent of the Custer County population categorized as minority (American Indian (0.6%), Black (0.0%), Asian (0.0%), Native Hawaiian/Pacific Island (0.4%), multi-racial (1.1%), other (0.4%)) was 2.5% in 2015, and was less than the 8.3% for the State of Idaho (U.S. Department of Commerce, 2016). The percent American Indian was lower for Custer County (0.6%) than for the State (1.3%) in 2015. The percent of families living in poverty was higher for Custer County (14.5%) compared to the State (10.9%).

The percent of the Blaine County population categorized as minority (American Indian (0%), Black (0.1%), Asian (1.2%), Native Hawaiian/Pacific Island (0.3%), multi-racial (1.2%), other (7.4%)) was 10.2% in 2015, and was higher than the 8.3% for the State of Idaho (U.S. Department of Commerce, 2016). The percent American Indian was lower for Blaine County (0.0%) than for the State (1.3%) in 2015. The percent of families living in poverty was lower for Blaine County (8.2%) compared to the State (10.9%).

Given the nature of the proposed action and demographics of the area, disproportionate human health and environmental effects on minority or low-income communities are not projected.

2.8.6. Climate Change

Though climate-driven increases of fire and insect infestations are likely to reduce carbon storage in western forests (Ryan et al. 2012), the management proposed in Alternatives A, B, and C would not contribute to greenhouse gas (GHG) emissions. The intact habitats found in the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness areas help to sequester carbon.

Direct and indirect effects of the action alternatives to the resources covered in this document are not expected to produce measurable changes to climate. With respect to all the natural processes and resources, there are no effects that when combined with past, present and reasonably foreseeable actions that would cumulatively affect the analysis area. Recommendations to address climate change include the development of a toolbox of management options, reduction of existing stresses, creation of resistance and promotion of resilience that enable ecosystems to adapt to climate change (Joyce et al. 2008). Alternatives A, B and C contain components of all those recommendations. Examples of these components from the proposed Plans that address maintaining healthy ecosystems more resilient to climate change are identified below:

- 2107 Promote the natural quality of wilderness character by allowing natural process to dominate.
- 2130 Ensure that the air quality over the Wilderness is protected from pollution in excess of established standards.
- 2133 Identify Wilderness Air Quality Values (WAQV) in an Air Quality Management Plan.
- 2137 Protect soil, water, riparian and aquatic resources to preserve wilderness character.
- 2134 Evaluate potential effects of proposed pollution sources from activities outside the wilderness for violation of Class II Prevention of Significant Deterioration standards within the wilderness.
- 2138 Maintain soil quality and long-term soil productivity by maintaining soil porosity, organic matter, hydrologic function (e.g., infiltration, water table, drainage, percolation), and buffering capacity (e.g., soil filtering and chemical regulation properties).
- 21151 Ensure research conducted in wilderness improves wilderness stewardship, provides benefits to society and science, and contributes to the preservation of wilderness character.
- 2142 Allow natural ecological processes to define the composition and abundance and distribution of native biotic communities.

- 2148 Allow natural processes and the forces of natural selection to be the primary factors determining the diversity of wildlife and fish species and their habitats.

Qualitatively, the nature of wilderness management and additional protections provided by the proposed Plans for each alternative would help maintain resiliency and protect soil, water, air, botanical, wildlife, fisheries and riparian resources from additional human caused effects. Future management under all alternatives would allow these resources to respond to natural processes.

2.8.7. Consistency with Existing FS and BLM Land Use Plans

As discussed in the WMP, the Proposed Action conforms to the goals, objectives, and decisions of the Challis RMP. The Sawtooth Forest Plan will be amended through approval of the WMP.

3. Affected Environment & Environmental Consequences

This chapter summarizes and compares the environmental effects of the alternatives relative to the factors used in determining significance. Addressing environmental effects this way focuses this assessment on pertinent effects necessary to make a decision, allowing for a concise document as directed by the Council of Environmental Quality's regulations for implementing NEPA (40 CFR Parts 1500–1508).

The Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness Management Plan Project has limited context and intensity (40 CFR 1508.27), individually or cumulatively, to the biological, physical, social, or economic components of the human environment. This project would have no adverse effect upon consumers, civil rights, minority groups and women, prime farmland, rangeland and forestland, and wild and scenic river corridors. Tribal notification and subsequent consultation processes completed from November 2016 through April 2017 have not identified any adverse effects to tribal interest and rights associated with the proposed action or alternatives, including to American Indian religious or cultural sites.

The ecology, inventory, and management of ecosystems are complex and developing disciplines. However, central ecological relationships are well established, and a substantial amount of credible information about ecosystems' biological and physical resources and social/economic interests within the project area are known. The alternatives were evaluated using the best available information and science.

Estimates suggest that Forest Service wilderness visitation increased roughly 3.2% per year between 2005 and 2012 (Holmes et al. 2015). Idaho Department of Labor projects that Idaho's population will grow 15.3% from 2015 to 2025, an annual growth rate of 1.4%, nearly three times as high as the national growth rate. 64% of use in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness is from Idaho. Thus, increased visitation in the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses can be anticipated over the life of this plan.

3.1. Resources Not Analyzed in Detail

Forest Service and BLM management strategies presented in each of the alternatives have the potential for producing negative and positive effects to various resource conditions. The proposed direction assigns goals, objectives, standards, and guidelines to NFS and BLM-administered lands that provide management emphasis, direction, and tools for future activities.

The interdisciplinary team (IDT) analyzed the potential effects, positive and negative, that could occur from management activities based on the goals, objectives, and standards allocated by alternative. Upon completion of their analyses, the IDT found none of the proposed alternatives would measurably affect the following resources: air quality, aquatic resources, cultural resources, fire management, rangeland resources, scenic environment, soil resources, or mineral resources. Therefore, these resources are not analyzed in detail but are summarized below.

Analysis regarding potential additions to the National Wilderness Preservation System, including the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses, were presented and analyzed in the *Inventoried Roadless Areas* section of Chapter 3 of the Final Environmental Impact Statement (FEIS) for the Boise National Forest, Payette National Forest, and Sawtooth National Forest Land and Resource Management Plan Revision (Forest Plan FEIS; USDA Forest Service 2003).

3.1.1. Air Quality

Management under each of the proposed alternatives would not adversely affect air quality as none of the direction would increase air pollutant concentrations. This MA lies within Montana/Idaho Airsheds ID-17 in Custer and Blaine counties, Idaho. The Idaho Department of Environmental Quality (IDEQ) will continue to regulate air quality in the state. The Forest Service will continue to participate in coordinated smoke management as a member of the Montana/Idaho State Airshed Group for wildland fire, minimizing or preventing smoke impacts while using fire to accomplish land management objectives.

3.1.2. Aquatic Resources

Management proposed under the alternatives would not quantifiably impact aquatic resources of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses. Effects on aquatic resources would primarily be related to trampling on trail corridors, in camp areas, and in meadows, as well as fish stocking, which is directed by American Fish and Wildlife Agencies (AFWA) policy. These effects would continue to be measurable at a localized level, but undetectable at the overall landscape scale of the wilderness areas. Overall, the management actions proposed under these alternatives would maintain, and possibly improve, current aquatic resource conditions within the wilderness areas.

The aquatic resources within these areas have previously been analyzed for management to maintain wilderness characteristics when the area was managed as recommended wilderness, and, as such, any of the proposed alternatives would remain within the effects previously analyzed in the 2003 Forest Plan FEIS (USDA Forest Service 2003). A small portion of the Cecil D. Andrus-White Clouds Wilderness lies on land managed by the BLM, Idaho Falls District, Challis Field Office. These 459 acres, or 0.5% of the entire wilderness area, were not previously analyzed under the Proposed Forest Plan Amendments, 2011 Wildlife Conservation Strategy, Phase 1: Forested Biological Community Environmental Assessment; however, this section of BLM-administered land is within the uplands of the Little Boulder Creek subwatershed and contains no live water or riparian areas. Therefore, the alternatives analyzed here would not contribute to effects on aquatic resources.

Due to the planning area being previously analyzed to maintain wilderness characteristics, as well as the inconsequential and unmeasurable impacts from the different alternatives to aquatic resources from this action, no further analysis is deemed necessary.

3.1.3. Heritage, Archaeological, and Cultural Resources

Proposed management of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses under each of the alternatives would not adversely affect cultural resources. The 2003 Forest Plan FEIS analyzed cultural resources across the area encompassed in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas to be managed in a manner to preserve and protect eligible, potentially eligible, and historic properties listed on the National Register of Historic Places (NRHP).

The variability in management proposed under the alternatives would not adversely affect cultural resources because any future proposed federal undertaking within either wilderness boundary would follow 36 CFR Part 800 regulations implementing Section 106 of the NHPA cultural resource protection analysis. Indeed, the importance of cultural resource protection is written into the WMP. Features of historical value “must be protected as rigorously as any of the other four required qualities” (untrammelled, natural, undeveloped, and outstanding opportunities for solitude or a primitive and unconfined type of recreation). If an NRHP-eligible historic property is discovered within the wilderness boundaries, that site may be designated as a feature of historical value. Because no measurable differences in effects to cultural resources would occur under the different alternatives, no further analysis of heritage resources is needed.

Agencies will ensure protection of historical values by enforcing all relevant laws, including the Antiquities Act of 1906 and the Archaeological Resources Protection Act of 1979 (ARPA). Informational signs regarding cultural resource protection laws will be posted as needed in appropriate places outside of the Wilderness boundaries.

3.1.4. Fire Management

The fire regime within the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses can be characterized as having relatively infrequent fires, yet fire extent can be large when wildfires do occur. Fire return intervals across much of each wilderness range from 60 to 300 years for the Hemingway-Boulders Wilderness and 70 to 300 years for the Cecil D. Andrus-White Clouds Wilderness. The current fuels and vegetation conditions reflect effects from fire exclusion, as well as other disturbances. Given the broad range of historical fire intervals and the effects of fire exclusion and other disturbances, moderate-to-high fire severity can be expected when large fires occur.

The Forest Plan FEIS (USDA Forest Service 2003) previously analyzed fire management across the area encompassed in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas to maintain wilderness characteristics, including an analysis of vegetation conditions, fuels, and fire regimes, and any of the proposed alternatives would remain within the effects previously analyzed. Fire management direction proposed for these areas is reflective of and driven by current agency policy for both the Forest Service and BLM. The fire management-specific goals, objectives, standards, and guidelines for the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses are dictated by national policy contained in Forest Service Manuals (FSMs) 2320 and 5100, BLM Manual 6340, and the Wilderness Act of 1964. Because of this directed management policy, no variability is proposed under any of the alternatives.

A small portion of the Cecil D. Andrus-White Clouds Wilderness lies on land managed by the BLM. These 459 acres, or 0.5% of the entire wilderness area, was not previously analyzed under the 2003 Forest Plan FEIS. However, fire management activities on these acres would be similar

to activities on surrounding NFS lands, and these acres would be impacted in the same manner. Due to the area being previously analyzed to maintain wilderness values and the fact that the proposed direction is dictated by existing agency policy for fire management, no further analysis is needed.

3.1.5. Lands Special Uses

No lands-based, non-recreation special use permits are authorized within the wilderness areas. Special use permits may, however, be authorized for existing water diversions and associated facilities, research permits, and commercial filming and photography.

Three existing diversions (Bowery, Deer Creek, and Last Chance) lie near the wilderness boundary. One water diversion (Deer Creek) is known to be located within the wilderness, and another may be (Bowery Creek). The number and type of diversion-related facilities in wilderness that require a permit will depend upon the final boundary survey.

Special use authorizations for scientific research and commercial filming and photography are occasionally authorized in the wilderness areas. The number and type of permits, which are generally short-term, temporary authorizations, vary from year to year. They may be allowed in wilderness so long as the proposed activity is appropriate for realizing the recreational or other wilderness purposes of the wilderness, is consistent with management direction, is compatible with wilderness values, and no reasonable alternative exist to achieve the same outside wilderness.

Management of diversion(s) would continue to be guided by law (e.g., the Wilderness Act) and policy (FSM 2323.43d, BLM 6340 1.6.C.16). No proposals are included within the WMP that would affect the ownership or legality of the diversion(s).

Research activities within wilderness are guided by agency policy (FSM 2324.4 and BLM 6340 1.6.C.14). Nothing in the WMP further affects this special use. Similarly, commercial filming in wilderness is guided by policy (FSH 2709.11 45.51b and BLM Manual 6340 1.6 C. 4, or most current policy), with no additional management direction provided in the WMP.

Management of non-recreation special uses within the wilderness areas will continue to be guided by law and policy; therefore, there is no need for additional analysis in this EA.

3.1.6. Scenic Environment

Proposed management under each of the alternatives would not adversely affect the scenery resource. Scenic standards for wilderness allow for natural ecological changes to the characteristic landscapes of the area. Allowing low visual-impact recreational facilities, defined by the exclusive use of native materials and minimal (to imperceptible) disturbance, are permitted.

3.1.7. Soil

The proposed alternatives would not measurably affect soils because each of the proposed management alternatives limits future soil disturbing activities to preserve wilderness character, and any future action would be subject to NEPA analysis which incorporates best management practices that would preserve soil resources. The Forest Plan FEIS analyzed soil resources across the area encompassed in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas to be managed in a manner to maintain wilderness

characteristics, and any of the proposed alternatives would remain within the effects previously analyzed in the Forest Plan FEIS (USDA Forest Service 2012).

Impacts, such as barren and compacted soils in areas of high use from hikers, campers, and recreational stock, to soils from recreation would continue. Campfires cause limited and localized impacts due to soil sterilization and gathering of fire wood, and fine materials for fire starting would remove organic matter from the soil surface that provides nutrients to the soil during decomposition. However, due to the scale of effects to soils being insignificantly small and unmeasurable, a measurable difference between the alternatives would not result.

A small portion of the Cecil D. Andrus-White Clouds Wilderness lies on land managed by the BLM. These 459 acres, or 0.5% of the entire wilderness area, were not previously analyzed under the Forest Plan FEIS. However, the soil resource on this area is similar to the surrounding NFS lands and would be affected similarly under each of the alternatives.

Due to the soil resources for the area being previously analyzed to maintain wilderness characteristics, the insignificantly small and unmeasurable impacts from any new management to further maintain wilderness characteristics, and no measurable differences in impacts from the alternatives, no further analysis of soil resources is necessary.

3.1.8. Rangeland Resources

The project area contains part or all of three cattle allotments, two sheep allotments, and the Ketchum-Stanley sheep driveway.

The rangeland resources within the wilderness areas have previously been analyzed for management to maintain wilderness characteristics and, as such, the proposed alternatives would remain within the effects previously analyzed in the 2003 Forest Plan FEIS (USDA Forest Service 2003).

A small portion of the Cecil D. Andrus-White Clouds Wilderness lies on land managed by the BLM. These 459 acres, or 0.5% of the entire wilderness area, was not previously analyzed under the Forest Plan FEIS. However, the rangeland resource within this area is similar to the surrounding NFS lands and would be affected by management for wilderness character similarly.

The Wilderness Act of 1964 states "...and (2) the grazing of livestock, where established prior to September 3, 1964, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture." Changes made to term grazing permits regarding livestock number, kind, class, period of use, and/or grazing management would normally be made after the analysis and decision process, unless expressly authorized under an administrative action. Because livestock grazing is not affected simply by the designation of wilderness, rangeland resources would continue to be managed in accordance with the terms and conditions included in the most current term grazing permit, Forest Plan, analysis document(s), allotment management plan, and/or annual operating instructions. The variability in management proposed by the alternatives would not affect livestock grazing within the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses in a measurable way because the grazing of livestock, where established prior to August 7, 2015, shall be administered in accordance with Section 4(d)(4) of the Wilderness Act; Section 102(e) of the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act; the grazing guidelines in House Report 96-617; and Appendix A of House Report 101-405. Irrigation is analyzed in more detail in section 3.3.3.

Due to the area being previously analyzed to maintain wilderness characteristics, the insignificantly small and unmeasurable effects from any new management to further maintain wilderness character, and no measurable differences in effects from the alternatives, no further analysis of rangeland resources is needed.

3.1.9. Minerals and Geologic Resources

The federal government classifies all minerals as either leasable, locatable, or saleable, depending on the laws governing their disposal. While mining claims for locatable minerals may occur on NFS lands, the mineral estate is managed by the BLM. The Forest Service has established regulation and policy pertaining to mineral resources to foster and encourage sound mineral development while protecting and managing surface resources. Subject to valid existing rights, all federal lands located in the wilderness areas are withdrawn from all forms of mineral entry, location, and patent.

Public Law 92-400 congressionally designated the Sawtooth NRA in 1972 and withdrew from mineral entry those federal lands a part of the Sawtooth NRA now included within the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act (P.L. 114-46). Fifty-five unpatented mining claims determined to have valid existing rights per the 1972 withdrawal date exist within the Cecil D. Andrus-White Clouds Wilderness area. Three unpatented mining claims existed within the Boulder-Hemingway Wilderness at the time of designation but have since been abandoned and closed. Currently, no active mineral exploration or mining occurs within either wilderness.

The largest block of unpatented lode claims occurs within the Baker Lake region of the Cecil D. Andrus-White Clouds Wilderness Area. American Smelting and Refining Company has maintained these claims since their location date of 1968. Unpatented lode claims associated with the former Hoodoo Mine are still considered active by the BLM. The Hoodoo Mine last operated in the early 1980s and produced concentrates of lead and zinc with a byproduct of silver. The boundary of the Cecil D. Andrus-White Clouds Wilderness excludes the lode claims that include surface features associated with the former mine (mine dumps, tailings, and surface facilities) and incorporates 17 of the lode claims associated with the larger claim block. The development potential associated with these lode claims is considered relatively low and, while valid existing rights were established as of the 1972 withdrawal prior to the acceptance of a Plan of Operation, validity of the discovery of valuable minerals would need to be verified by the Forest Service as to the 2015 priority date set by P.L. 114-46.

No active or pending mining claims were identified for the subject BLM-administered land in the Cecil D. Andrus-White Clouds Wilderness Area.

Abandoned mine land features can become an attractive nuisance on the landscape as they tend to attract public curiosity but may potentially pose a hazard to the public. Three federal lode mining claims belonging to the Falling Star group were abandoned by operation of law shortly after the 2015 designation of the Hemingway-Boulder Wilderness. Inspections by Forest Service minerals administrators have documented the occurrence of a partially collapsed adit and small miners cabin within the area of the abandoned claims. Access to this area is via the East Fork of the Salmon River Road to West Pass Creek. The area lies approximately 4 miles beyond the trail end at West Pass Creek within the Hemingway-Boulder Wilderness.

The Sawtooth National Forest is continuing to address the site condition associated with the abandoned Hoodoo Mine at the end of the Slate Creek Road. Trail access into the

Cecil D. Andrus-White Clouds Wilderness area exists immediately within the vicinity of the former mining area. While lode claims associated with the Hoodoo site span the wilderness boundary, continued restoration efforts at the site would not impact wilderness character.

As per the Wilderness Act, “Nothing in this Act shall prevent within National Forest wilderness areas any activity, including prospecting, for the purpose of gathering information about mineral or other resources, if such activity is carried on in a manner compatible with the preservation of the wilderness environment. Furthermore, in accordance with such program as the Secretary of the Interior shall develop and conduct in consultation with the Secretary of Agriculture, such areas shall be surveyed on a planned, recurring basis consistent with the concept of wilderness preservation by the United States Geological Survey and the United States Bureau of Mines to determine the mineral values, if any, that may be present; and the results of such surveys shall be made available to the public and submitted to the President and Congress.” In accordance with policy, the Forest Service must ensure surveys are conducted as much as practicable without the use of motorized equipment or mechanical transport.

Mineral collection and “rock-hounding” type activities that involve only very minor surface area disturbance are acceptable provided they are non-commercial, only occur with non-motorized collection methods, and are compatible with the preservation of the wilderness environment. The Forest Service can evaluate these activities with a geologic exploration permit or an interagency agreement (FSM 2820). Collecting paleontological resources may be considered under new permitting requirements specified at 36 CFR 291 if specific conditions are prescribed for the protection of the wilderness environment. Additional stipulations pertaining to the gathering of information of resources other than minerals are specified at 36 CFR 293.15.

Given there are no pending or active mineral actions in the subject areas and the WMP does not restrict rock-hounding, effects to the mineral resource include the inability to explore for or develop leasable, saleable, or locatable minerals within the Boulder-Hemingway Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. However, these effects are the consequence of legislation and Congressional act, not the result of the wilderness planning process; therefore, no effects to mineral resources would occur from any of the alternatives. While valid existing rights relative to locatable minerals do occur within the Cecil D. Andrus-White Clouds Wilderness, specific measures to determine validity would need to be undertaken prior to the Forest Service’s acceptance of a Plan of Operations.

3.2. Past, Present, and Reasonably Foreseeable Future Actions

NEPA requires analysis and disclosure of potential cumulative effects—the impact on the environment that results from the incremental impact of an action when added to other relevant past, present (ongoing), and reasonably foreseeable actions (those for which there are existing decisions, funding or identified proposals, but that have not yet been implemented), regardless of what agency or person undertakes such actions (40 CFR 1508.7). Cumulative effects analyses are carried out in accordance with 40 CFR 1508.7 and *The Council on Environmental Quality Guidance Memorandum on Consideration of Past Actions in Cumulative Effects Analysis*, dated June 24, 2005.

Past activities were considered by each resource area assessed and are incorporated into the baseline conditions disclosed in the affected environment for each resource. Cumulative effects disclosures for each resource addressed present, ongoing, and reasonably foreseeable actions that fell within the cumulative effects analysis area identified for the resource. Past and present actions include livestock grazing-related activities; wildlife management actions (predator

control); treatment of invasive weeds; mining; fish stocking; wildfire; wildfire suppression; research projects (vegetation sampling/collection, bighorn sheep research); recreation activities (dispersed and developed camping, system/non-system route construction/development, hiking, biking, motorcycle, snow machine, hunting, fishing, trapping, commercial outfitting and guiding); search and rescue; water diversion structures and their operation; timber harvest and fuels treatments; personal firewood cutting; construction and use of system and non-system roads; construction and use of motorized and non-motorized trails; pesticide and herbicide application; recreation and non-recreation special use permitted activities; activities associated with the Idaho Department of Transportation, including operation of material sources for road construction and maintenance, transport of material sources from outside the cumulative effects boundary, highway maintenance in the right-of-way consisting of clearing of vegetation in the right-of-way, drainage cleaning and installation, herbicide application, sanding, and snowplowing; operation of the Sawtooth Fish Hatchery, a fish weir on Redfish Lake Creek, and Camp Stanley on State land within the Sawtooth NRA; mining operations on private lands; livestock grazing operations on State and private lands; residential and commercial developments on private lands; private land fuels reduction projects; diversions and the associated irrigation on State and private lands; and operation and maintenance, including vegetation management, along utility rights-of-way. All of these actions are expected to continue into the foreseeable future. See individual specialist reports (available in the project record) for additional information.

3.3. Wilderness

3.3.1. Introduction

The wilderness resource is integral to the project's Purpose and Need. The potential for WMP strategies affecting wilderness character was identified as an issue for analysis through internal and external public scoping. Direction presented in the WMP covered by law or policy is not further discussed or analyzed here.

This section addresses the effects of the proposed WMP, including the Proposed Action and alternatives, on wilderness character. The two wildernesses occur within the boundaries of the Sawtooth National Forest and the Idaho Falls District, Challis Field Office of the BLM.

Federal agencies managing wilderness are mandated to protect wilderness character per Section 4(b) of the Wilderness Act. In the relevant part, the Act states: "Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area." Although wilderness character is a complex idea and is not explicitly defined in the Wilderness Act, the qualities of wilderness character are described as follows (Landres et al. 2015):

- **Untrammeled**—Area is unhindered and free from intentional actions of modern human control or manipulation.
- **Natural**—Area appears to have been primarily affected by the forces of nature and are substantially free from the effects of modern civilization.
- **Undeveloped**—Area is essentially without permanent improvements or the sights and sounds of modern human occupation.

- **Outstanding opportunities for solitude or a primitive and unconfined type of recreation**—Area provides outstanding opportunities for recreation in an environment that is relatively free from the encumbrances of modern society, and for the experience of the benefits and inspiration derived from self-reliance, self-discovery, physical and mental challenge, and freedom from societal obligations.
- **Other Features of Value**—Area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. Though not required of any wilderness, where they are present they are part of that area's wilderness character and must be protected as rigorously as any of the other four required qualities.

The *untrammeled*, *natural*, *undeveloped*, and *outstanding opportunities* qualities were chosen as analysis indicators for this section as identified during scoping. The *other features of value* wilderness quality was not included as an indicator because it was not indicated as an issue for analysis during scoping.

The spatial boundary for analyzing direct, indirect and cumulative effects to wilderness character is the boundary of each wilderness because the Wilderness Act and the mandate to preserve wilderness character apply to that area.

The temporal boundary for analyzing direct, indirect, and cumulative effects depends on whether the effect would be temporary, short-term, or long-term. For example, temporary (0–3 years) effects on solitude could occur during an encounter with another person or group during traveling or camping, short-term effects (3–15 years) could occur from treatment of invasive weeds, and long-term effects (15+ years) resulting from the permanent closure of an area could have lasting effects on the wilderness character.

3.3.2. *Affected Environment*

Resource Indicator and Measure 1: Untrammeled

The Wilderness Act states that wilderness is “an area where the earth and its community of life are untrammeled by man.” As described in *Keeping It Wild 2: An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* (*Keeping it Wild 2*; Landres et al. 2015), the untrammeled quality could be affected by actions that intentionally control or manipulate the components or processes of ecological systems within wilderness. Intentional manipulation is defined as follows (Landres et al. 2015, p. 34):

... 'intentional manipulation' means an action that purposefully alters, hinders, restricts, controls, or manipulates the 'the earth and its community of life,' including the type, quantity, or distribution of plants, animals, physical resources (such as air, water, or soil), or biophysical processes (such as fire) inside a designated wilderness.

Portions of the Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulders Wilderness areas have had some degree of human control or manipulation of the biophysical environment occur before and since their designation as wildernesses. Authorized past actions which affect the untrammeled quality of the wilderness include trail and road construction; historic mining; management of wildland fire (8 prescribed burns between 1983 and 2010); stocking of indigenous and non-indigenous fish in lakes and streams; collaring or tagging fish and wildlife species; livestock grazing and associated structures (2 exclosures, 5 fences); and water diversions.

Untrammelled and natural qualities are often linked in an inverse way because actions taken to improve the natural quality are also intentional manipulations that degrade the untrammelled quality (Landres et al. 2015). An example is the Sawtooth and Boise National Forests Invasive Species Project (USDA Forest Service 2016) which allows for the management option of chemical, biological, or hand treatment to control the spread of noxious and invasive nonnative plants in wilderness. These invasive species displace and can ultimately replace entire native plant communities. Removing invasive nonnative plants is a form of trammeling, but its goal is to restore the natural ecosystem in the wilderness, thereby revealing the inherent challenge in managing wilderness.

Resource Indicator and Measure 2: Natural

The Wilderness Act states that wilderness is, “protected and managed so as to preserve its natural conditions.” As described in *Keeping it Wild 2*, analysis of the natural quality focuses on human-caused change to the natural environment within the wilderness, specifically with reference to plants, animals, air and water, and ecological processes (Landres et al. 2015, p. 40). The natural quality of the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas is mostly intact.

Plants

Vegetation ranges from mountain sagebrush to whitebark pine ecosystems. Some changes to the native vegetation composition have occurred in portions of the wilderness, including the introduction of invasive plant species, exclusion of fire, livestock grazing impacts, and recreational impacts. Whitebark pine stands near recreation sites have been affected by firewood gathering, structure building, and stock tethering. Whitebark pine snags and dead branches are often used for fuelwood or to build campsite structures. For additional information, see the vegetation technical report available in the project record.

Animals

The varying elevations in the area provide important habitat for a wide array of wildlife species. The wildernesses provide habitat for Chinook salmon, steelhead cutthroat trout, and strong local populations of bull trout. Wood River Sculpin occur in portion of the southern Hemingway-Boulders Wilderness.

Many of the high alpine lakes within the wilderness areas have hatchery-stocked recreational fisheries, with species including cutthroat trout, and non-native eastern brook trout, golden trout, rainbow trout, and arctic grayling. These lakes have been regularly stocked to provide fishing opportunities. Aquatic habitat around these lakes is functioning at risk in some localized areas due to past and present impacts from trail alignments, dispersed recreation, livestock grazing, and historic mining. Native fish and amphibian populations are at risk from the presence of non-native fish species and the habitat impacts described above.

The Wickiup-Sheep, Big Boulder Creek, Upper East Fork Salmon, Germania Creek, Slate Creek, Prospect-Robinson Bar, Swimm-Martin, Upper Warm Springs, North Fork Big Wood-Murdock, and Upper North Fork Big Wood River subwatersheds have been identified as important to maintaining or restoring strong populations of native species and the recovery of listed fish species.

Shrublands are used by pronghorn antelope, elk, mule deer, and moose in spring, fall, and winter and greater sage-grouse during late summer. Area forests provide habitat for ESA-listed Canada lynx and a number of Region 4 Sensitive species, including northern goshawk, flammulated owl,

great gray owl, boreal owl, three-toed woodpecker, Townsend's big-eared bat, gray wolf, and fisher. Several migratory bird species and pileated woodpecker, a management indicator species (MIS), also occur in the area. High-elevation alpine areas provide habitat for bighorn sheep in the spring and summer and mountain goats year-round. The MA also provides habitat for wolverine, which is proposed for ESA listing. Much of the area provides nesting and foraging habitat for migratory land birds and general habitat for wide-ranging mammals, such as bear and mountain lion. Gray wolves were re-introduced into central Idaho in 1995 and 1996, and several packs have used portions of the wilderness areas since then. See the wildlife technical report for more information (project record).

Air, Water, and Ecological Processes

Historically, a full suppression strategy has been used on most fires, altering natural vegetation, including whitebark pine. Over the last two decades (1997–2016), 23 wildfires have burned 10,921 acres of the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. Seventeen of these fires were caused by lightning (74%) and six were caused by campfires (26%). Most acreage burned in the last 20 years occurred during the 2005 Valley Road Wildfire, which burned into what is now designated as the Cecil D. Andrus-White Clouds Wilderness. There have also been several Fire Use incidents or wildfires managed under a strategy that doesn't call for full perimeter control. See the Fire Resource Memo in the project record for more information.

Current regulations limit the size of groups to 20 people and recreational stock to 25 head (except for the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness where no restriction exists), greater than most campsites can accommodate without unacceptable impacts to resources, including campsite expansion and development of unauthorized user-created routes, particularly within sensitive environments such as the high alpine lakes. Even with these limitations, recreational stock use and recreational grazing at high elevation lakes is affecting soil; vegetation, including whitebark pine; riparian processes; and aquatic biota. Wilderness rangers regularly report encountering unburied human feces, garbage, and other sanitation issues, with increasing use and no human waste regulation in place.

Across both wilderness areas, some campsites and stock tie areas are denuded of dead and downed wood and living trees have been damaged by recreationists. In elevations above 8800 to 9000 feet, whitebark pine is the predominant tree species, and recreationists use it for fuelwood and tying stock. Campfire rings and associated scars and trash appear throughout the area, including at low use and sensitive high alpine areas. A relatively short season exacerbates social and physical resource degradation by concentrating use.

High and concentrated recreational use has resulted in soil compaction, fire scarred rock, loss of and damage to vegetation and ground cover, and increased erosion. Campsites at some popular destination sites, predominantly Boorn Lakes, Chamberlain Lakes, Boulder Chain Lakes, Big Boulder Lakes in the Cecil D. Andrus-White Clouds Wilderness, have been used for decades. Though these sites show many effects from intense and heavy use, they are the sites stabilized and resilient to additional use within the perimeter of impact. The concern in these wilderness areas is the expansion of these existing sites and proliferation of new sites.

The project area contains part or all of three cattle allotments, two sheep allotments, and the Ketchum-Stanley sheep driveway. An estimated 2,138 acres are considered capable for livestock grazing. See the rangeland resource technical report in the project record for additional information.

The 2 wilderness areas comprise portions of 5 watersheds in the Upper Salmon River and 3 watersheds in the Big Wood River Subbasins. The major streams in the planning area are the East Fork Salmon River, Warm Springs Creek, Slate Creek, Big Boulder Creek, Little Boulder Creek, Germania Creek, West Pass Creek, as well as the North Fork of the Big Wood River. Water Quality Integrity ratings for the subwatersheds vary from high (functioning appropriately) to moderate (functioning at risk) to low (not functioning appropriately), with the vast majority being moderate.

The Clean Water Act stipulates that States are to adopt water quality standards. Included in these standards are provisions for identifying beneficial uses, establishing the status of beneficial uses, setting water quality criteria, and establishing Best Management Practices (BMPs) to control non-point sources of pollution. The IDEQ has not yet formally designated beneficial uses for the streams within the Wilderness planning areas. However, IDEQ presumes that most waters in Idaho, including those within the wilderness areas, will support cold water aquatic life as well as primary or secondary contact recreation beneficial uses (WQS § 101.01a).

Localized accelerated sediment impacts from dispersed recreation, livestock grazing, and historic mining have occurred in the subwatersheds. Three of the 18 subwatersheds in this planning area were listed in 2012 as having impaired water bodies under Section 303(d) of the Clean Water Act: Slate Creek, Wickiup-Sheep, and Harden-Rough Creek. The pollutant of concern was sedimentation/siltation for the Harden-Rough waterbodies as well as not meeting criteria for combined habitat/bio-assessments (cold water aquatic life & salmonid spawning) for the Slate and Wickiup-Sheep waterbodies. No TMDL-assigned subwatershed/waterbodies occur in the project area.

The Cecil D. Andrus-White Clouds and Hemingway-Boulders Wildernesses lie within Montana/Idaho Airsheds ID-17 in Custer and Blaine counties, and are located within a state designated Class II airshed regulated by the Environmental Protection Agency (EPA) as required by the federal Clean Air Act. They are bracketed by the nearby Sawtooth Wilderness, Craters of the Moon National Monument, and the Selway-Bitterroot Wilderness, all federal Class I areas. The highest level of protection from air pollution impacts is provided to these Class I areas, which are monitored through visibility monitoring by Interagency Monitoring of Protected Visual Environments (IMPROVE) sites. These three IMPROVE sites are reasonable approximations of visibility conditions in west-central Idaho, including the Cecil D. Andrus-White Clouds and Hemingway-Boulders Wilderness areas, and have documented good visibility with periodic reductions during periods of active wildfire (UC Davis IMPROVE Report 2014).

In addition, data from lichen monitoring (one most air-pollution sensitive groups of terrestrial organisms) indicate an absence of air pollution-related issues (St. Clair 2013). Analysis of snow collected at Banner and Galena Summits shows generally low concentrations of contaminants (Ingersoll 2016). Another key component of the nearby Sawtooth and Frank Church-River of No Return Wilderness air quality monitoring has been lake chemistry sampling, which is very diagnostic of atmospheric chemistry in sensitive lakes. Mebane and Gurrier (2006) identified changes in lake chemistry in their 2006 report that may have been the result of drought, but air pollution or other unidentified factors were not ruled out; more recent reports have not been produced. These data are reflective of conditions in less sensitive Challis volcanics bedrock as well as the more sensitive granitic bedrock of the Idaho Batholith found within the wildernesses.

See the wildlife, fisheries, fire, rangeland resources, and vegetation technical reports (available in the project record) for more detailed descriptions of the current conditions for the natural wilderness character.

Resource Indicator and Measure 3: Undeveloped

As described in the Wilderness Act, wilderness is “an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation,” with “the imprint of man’s work substantially unnoticeable.” The Wilderness Act identifies “expanding settlement and growing mechanization” as the forces that cause wild country to become occupied and modified and clarifies in Section 4(c) that “there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation.”

For the most part, these wildernesses show few signs of human habitation and permanent improvements. Developments—such as range fences, developed springs, troughs, and abandoned or unauthorized vehicle routes and mining debris—are scattered across the wildernesses. Generally, these developments are few and far between considering the vastness of the landscape. Emergency administrative authorizations for motorized/mechanized use occur for fire suppression and SAR operations.

Recreational infrastructure degrades the undeveloped, the solitude and the primitive and unconfined recreation qualities, but because their primary purpose is related to recreation, they are considered and analyzed only in the latter quality. This organization is consistent with *Keeping It Wild 2* (Landres et al. 2015).

Both wildernesses have permanent improvements and built structures that give the sense of human occupation, such as fences and troughs. The undeveloped quality is degraded by the presence of these developments, structures, or installations. Range improvements include 2 water troughs, portions of 5 fences (approximately 0.8 miles), and 2 exclosures in the Upper East Fork Allotment⁶ within the Hemingway-Boulders Wilderness and 1 exclosure, 1 fence (approximately 0.3 miles), and 2 water troughs in the Lower East Fork Allotment within the Cecil D. Andrus-White Clouds Wilderness. The closed Warm Springs Meadow Allotment, which also overlaps a portion of the Cecil D. Andrus-White Clouds Wilderness, contains portions of 4 fences (approximately 0.5 miles total), which may have been affected by the 2005 Valley Road Fire. At least one water diversion extends into the Hemingway-Boulders Wilderness (depending on the boundary survey, other diversions may also occur in the wildernesses). These developments are allowable, non-conforming uses under the Wilderness Act. The Forest Service and BLM are required to allow these uses to continue within the framework of their existing authorizations or new authorizations as specifically outlined by law and policy while minimizing impacts to wilderness character. Generally, these developments are few and far between considering the vastness of the landscape.

No motorized trails or roads were closed because of wilderness designation. However, all trails were closed to mechanized use, including some previously used by mountain bikers. Some use continues illegally, primarily on Castle Divide (NFS trail 047) and Antz Basin/Warm Springs (NFS trail 671).

The sights and sounds of motorized and mechanized uses can penetrate the wilderness and affect a visitor’s experience. In some places, roads and motorized trails define the boundary of the Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulders Wilderness areas; notably Rough Creek (NFS trail 647), Garland Lakes/Martin Creek (NFS trails 646 and 648), Germania Creek (NFS trail 111), Frog Lake Loop (NFS trails 047 and 682), South Fork of the

⁶ This allotment was retired on 8/28/17, and is closed to grazing in perpetuity.

East Fork of the Salmon River (NFS trail 112), and North Fork Wood River Road. Slate Creek and West Pass Creek Roads and Warm Springs Trail “cherry-stem” into the wilderness. Pre-existing vehicle routes accessing dispersed campsites, and unauthorized, user-developed routes intrude on the wilderness boundaries and degrade wilderness character. Some areas of concern include the North Fork of the Big Wood River, Upper East Fork of the Salmon River, Lower Warm Springs, and Slate Creek. During the winter, snowmobilers are drawn to high-elevation heavy snowpack found in the wilderness, and boundaries are difficult to sign. These factors present a range of management challenges, including the potential for motorized or mechanized incursions.

The undeveloped quality is also degraded by those rare occasions of authorized motorized equipment usage (e.g., chainsaws, helicopter landings) that are either used during emergency incidents or are authorized as the minimum tool to implement a planned activity as determined in a Minimum Requirements Analysis (MRA). Over the past 30 years, prior to wilderness designation, authorizations were given for trail maintenance projects, the transportation of construction materials for recreational facilities, and to remove non-conforming structures and mining debris. Most recently, in 2010, large structural bridge materials were delivered by truck to the accessible Murdock Trail.

Historic activities beginning in the 1870s, such as mining and ranching, have left related installations or structures that may be considered for historical value. Mining and prospecting historically occurred in the Big Boulder Creek, Washington Basin, Germania Basin, Cherry Creek and West Pass Creek areas. Fifty-five unpatented mining claims in the Cecil D. Andrus-White Clouds Wilderness were determined to have valid existing rights per the 1972 withdrawal date. Three unpatented mining claims existed within the Hemingway-Boulders Wilderness area at the time of designation but have since been abandoned and closed. Currently, no active mineral exploration or mining occurs. Mining mills, cabins, and placer mining remains are found in several drainages. Historic ranching and recreation activities are represented by several log structures, but an extensive cultural resource survey has not been conducted to determine their number or significance.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

The Wilderness Act states in Section 2(c) that wilderness has, “outstanding opportunities for solitude or a primitive and unconfined type of recreation.” *Keeping it Wild 2* describes primitive recreation as follows (Landres et al. 2015, pp. 55–56):

Primitive recreation requires self-reliance, as well as travel that is unassisted by mechanical or motorized equipment. Many different types of structures, installations, and developments are constructed to facilitate access or use of the wilderness, to improve visitor safety, or to protect other wilderness resources from visitors. Facilities designed for these reasons are categorized as recreational in this monitoring strategy and occur in many wildernesses. Examples are: system trails, trail signs, bridges, stock tie facilities.

Wilderness protection provides the visitor an opportunity to experience unconfined recreation in undeveloped, primeval, and natural conditions. In an ideal world, these conditions would coalesce. Unfortunately, recreation leaves a footprint, or impact, on wilderness lands. No restrictions currently exist on where people travel or the total number of people who may enter the wilderness. One person from each group is requested to sign in at the registration box located at each trailhead. The following prohibitions were issued for the Boulder-White Clouds

recommended wilderness in 1996 (Special Order 0414-04-034) to protect natural conditions and users' wilderness experiences, and are in effect today:

- a) Having greater than 20 persons in a group
- b) Being in the area with a combined number of recreational stock in excess of 25 animals
- c) Shortcutting trail switchbacks on foot or with recreational stock
- d) Building, maintaining, attending or using campfires within 200 yards of the following lakes: Cirque, Cove, Sapphire, Sheep, Slide, Tin Cup, Gunsight, Four Lakes Basin, Scree, Shallow, Castle, and Chamberlain 9,849'
- e) Tethering recreational stock within 100 feet of springs, lakes or streams
- f) Tying recreational stock to live trees for periods longer than one hour

The Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness provide outstanding opportunities for solitude and primitive, unconfined recreation. The varying topography of the wildernesses and relatively few trails provide excellent opportunities for solitude. In addition, a range of recreational experiences can be found, including short day hikes, plentiful backpacking options, multi-day pack trips, or off-trail scrambles allowing for exploration and discovery. A variety of dispersed recreational activities occur throughout the area, including hiking, backpacking, stock packing, hunting, fishing, horseback riding, backcountry skiing, wildlife viewing, photography, mountaineering, and other pursuits.

Approximately 88.5 miles of trail occur within the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas, ranging from a minimally developed Class 1 trail to a more developed Class 3 trail (22.2 miles of Class 1; 37.6 miles of Class 2; and 28.5 miles of Class 3), providing a variety of wilderness trail opportunities (for trail standards see USDA Forest Service [2008], *Trail Class Matrix*). Additionally, both wilderness areas offer extensive opportunities for off-trail exploration that supports opportunities for challenge, risk, and solitude.

Few recreational developments are found in the MA. Trail structures are typically limited to puncheons and turnpikes made of native materials; however, two structural timber bridges were installed as part of an accessible trail development on Murdock Creek Trail in the Hemingway-Boulders Wilderness prior to designation. In an effort to concentrate impacts caused by recreational stock, 7 stock tie areas are identified in high-use portions of the Cecil D. Andrus-White Clouds Wilderness. These sites are provided with either hitching posts or cable highlines. Signs are placed at trail junctions and to identify stock tie areas. Campsites are undesignated, primitive sites with no permanent developments, such as toilets or constructed firepits. Developments including wall tents, outhouses, fences, a stock watering trough, and caches with cook gear and tools at 3 campsites assigned to stock outfitters provide visitors a less primitive experience.

Permitted livestock grazing may impact recreational experiences in areas where active allotments exist. Impacts include livestock waste, vegetation trampling and trails, negative interactions with guard dogs, and the presence of developments such as fencing and water troughs. For many visitors, all livestock encounters and related impacts and structures listed detract from the wilderness experience, but some detract more often than others. For example, Johnson et al. (1997) found when examining wilderness visitor perceptions of grazing in wilderness that noticeable detractors were manure in campsites (88%), livestock encounters in camp (87%), livestock near streams and lakes (82%), and livestock on or near trails (78%).

Resource Indicator and Measure 5: Opportunities for Solitude

The Wilderness Act states in Section 2(c) that wilderness has, “outstanding opportunities for solitude or a primitive and unconfined type of recreation.” As described in *Keeping it Wild 2*, opportunities for solitude are affected by visitor use and certain characteristics of the setting (Landres et al. 2015, p. 53):

...encountering other visitors in wilderness, or seeing or hearing the signs of modern civilization, may detract from opportunities to experience solitude. Increasing visitation, human population growth (especially near wilderness), and areas of concentrated use within wilderness all have the potential to degrade opportunities for solitude. The opportunity to achieve solitude within the wilderness is a function of both the density of visitors, most of whom stay on established trails and preexisting campsites, and the opportunity to get away from those visitors and their impacts by going to more remote areas.

The words solitude, primitive, and unconfined convey a certain visitor experience expectation, which may include, but is not limited to, experiencing natural sights and sounds, freedom, risk, the physical and mental challenges of self-discovery and self-reliance, and the use of traditional skills free from the constraints of modern culture.

Management presence typically includes 2–4 wilderness rangers, a Wildlands Education Coordinator, and 2 trail maintenance crews that split their time between the Sawtooth, Cecil D. Andrus-White Clouds, and Hemingway-Boulders wilderness areas. Several non-profit organizations lead volunteer trail maintenance and reconstruction projects. Volunteers and interns are also used to augment ranger patrols and support the Wildlands Education Program, providing information and education to users prior to their wilderness visit or while they are in the backcountry.

Visitor Use Patterns and Characteristics of the Wildernesses

Opportunities for solitude abound in both wilderness areas, though more readily in the Hemingway-Boulders Wilderness due to the limited access, rugged terrain, and few trails. These opportunities vary depending on the time and location of a visitor’s trip. While visitors may experience frequent encounters with other visitors during certain times and places, those that choose less popular destinations, days of the week, or times of the year will easily find solitude in the wilderness. Because of the extended winter season, over 80% of use occurs in a very compressed timeframe (June–August) across both wilderness areas.

Opportunities for solitude vary by location and season within the Cecil D. Andrus-White Clouds Wilderness. Due to landscape and topographic features, most recreational use is funneled toward lake basins in sensitive, high-elevation areas. As a result, certain areas receive relatively high and concentrated recreational use, especially Boorn Lakes, Chamberlain Lakes, Boulder Chain Lakes, Big Boulder Lakes. The short summer season has the heaviest visitation (84%) while limited winter recreation occurs, largely guided backcountry skiing on the front range of the Boulder Mountains, and 12% of use occurs in the fall.

Due to their remoteness and primitive access routes, the off-trail, and northern portion of the Cecil D. Andrus-White Clouds Wilderness and the majority of the Hemingway-Boulders Wilderness see relatively few visitors and, as such, provide outstanding opportunities for solitude and primitive recreational experiences. Three of the five Hemingway-Boulders Wilderness trailheads are accessed from the North Fork Canyon Road, only 9 miles north of Ketchum/Sun Valley, receiving over 90% of visitor registration associated with that wilderness; over 95% of it as day-use.

Recreation site monitoring is one way to measure effects on wilderness character from visitors, as well as impacts to natural resources and visitor experience. A partial survey was conducted in 2003. All sites were re-inventoried and the survey was completed in 2016, identifying a total of 238 recreation sites.

Of the 224 recreation sites in the Cecil D. Andrus-White Clouds Wilderness, 29% recorded heavy-to-extreme impacts and 71% had light-to-moderate impacts. Of the 14 sites in the Hemingway-Boulders Wilderness, 14% had heavy-to-extreme impact levels and 86% recorded light-to-moderate impacts. In the Hemingway-Boulders Wilderness, 64% of the recreation sites are less than 500 square feet. Within the Cecil D. Andrus-White Clouds Wilderness, 51% of sites are less than 500 square feet and 17% are greater than 1,500 square feet.

Recreational stock use evidence (manure/feed or manure/feed/tree damage) occurs at 20% of the recreation sites in the MA. One-third of sites had damage to over 25% of the trees. Campfire evidence occurs in 89% of the recreation sites in the MA. Wilderness rangers cleaned over 1,000 fire rings and removed 650 inappropriate rings over a 12-year period.

Visitor encounter monitoring was completed for traveling and camping encounters in both wildernesses in 2016, using Forest Service protocol (Broom and Hall n.d.) to provide a baseline for future management. Just less than 1% of encounters made while traveling in the Hemingway-Boulders Wilderness and 3.5% in the Cecil D. Andrus-White Clouds Wilderness were off-trail, in proposed Zone 1. Most traveling encounters occurred in proposed Zone 4 (78.3% in Hemingway-Boulders Wilderness and 80.2% in Cecil D. Andrus-White Clouds Wilderness). Encounters in campsites (the number of other camping groups visible or audible from each occupied campsite) only occurred in the Cecil D. Andrus-White Clouds Wilderness where 84.6% occurred in Zone 4 and none occurred in Zone 1. Past visitor studies identified campsite interaction as having the most impact to a visitor's perception of solitude (Cole and Hall 2008).

The following visitor use information is based on data from the 2016 voluntary visitor registration system and wilderness ranger reports (available in the project record).

Total Use—A total of 2,908 individual groups registered at trailheads having potential access to the Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulders Wilderness with an average length of stay of 2.4 days. Seventy percent of those visitors registered at trailheads accessing the Cecil D. Andrus-White Clouds Wilderness and 30% registered at trailheads accessing the Hemingway-Boulders Wilderness. Over 50% of users registered either at the Fourth of July trailhead (32%), accessing the Cecil D. Andrus-White Clouds Wilderness, or the three North Fork Wood River Trailheads (24%), accessing the Hemingway-Boulders Wilderness. Sixty percent of registered visitor use in these wilderness areas is to the top 5 destinations: Boorn Lakes (17%), Chamberlain Lakes (12%), North Fork Wood River (12%), Murdock Creek (10%), and Boulder Chain Lakes (9%). Fifty-six percent of registered users were from Idaho, and over half of those were from Wood River Valley, Boise, Twin Falls, or Stanley.

Party Size—Regulations were implemented in 1996 establishing a group size limit of 20 persons and 25 head of recreational stock in the Boulder-White Clouds recommended wilderness. According to registration data, the typical group visiting the areas now designated as the Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulders Wilderness averaged 2.8 people per group. One percent of users traveled in groups of more than 12 people. Parties traveling with stock usually had a slightly larger group size, averaging 4 people, and an average of 4 head of stock per group. No groups occurred with more than 12 people or more than 14 head of stock. Past trailhead registration and wilderness ranger contacts indicate that some groups

exceed the current group size limit, particularly at popular destinations during the summer season.

Recreational Pack Stock Use—Of registered users, 1% traveled with stock, with a 1:1 person-to-stock ratio. No groups had more than 10 head of stock. Seventy percent of stock users accessed the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness from the North Fork Wood River (22%), Little Boulder (22%), Fourth of July (13%), and Rough Creek (13%) trailheads. North Fork trails, Hatchet Lakes, Boulder Chain Lakes, and Boorn Lakes were the most popular destinations. Wilderness rangers encountered 50 groups of overnight stock users between 2004 and 2016; 5 groups had over 8 head of stock, and 3 of these groups had more than 14 animals. Of 18 groups of day stock users, none had more than 14 head of stock, 1 group had more than 8 animals. In 2016, one group of 4 people registered with 13 goats going to Slide Lake⁷.

Commercial Services

The Wilderness Act (Sec. 4(d)(6)) allows for commercial services, “to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes.” Commercial outfitters can facilitate visitor access to wilderness for those individuals who may not be prepared to engage in a specific activity without the support of an experienced professional. Some of these reasons include the extent of preparation and equipment needed by visitors traveling from afar, physical limitations due to age or other conditions, safety concerns, or the desire to experience wilderness with skilled and knowledgeable guides.

To be issued a Forest Service Special Use Permit or a BLM Special Recreation Permit, outfitters are required to hold a current outfitter and guide license issued by the Idaho Outfitter and Guides Licensing Board.

Six outfitters hold priority use permits for operations in the Cecil D. Andrus-White Clouds Wilderness, five are administered by the Sawtooth NRA and one is administered by the Challis Field Office. Of these six outfitters, three also operate in the Hemingway-Boulders Wilderness. These outfitters offer guided hiking, mountain climbing, skiing, horse packing, hunting, and fishing opportunities. Two assigned outfitter campsites are located in the Cecil D. Andrus-White Clouds Wilderness and one is located in the Hemingway-Boulders Wilderness. These sites have some development, including tent and stock structures. Temporary use outfitting and guiding occurs in these areas as well. The type and amount of temporary outfitter and guide use varies from year to year.

One of the 2 climbing/skiing/hiking/backpacking outfitters reported a single trip into the Cecil D. Andrus-White Clouds Wilderness from 2006 to 2015. Most trips provided by a second outfitter were day-use ski trips in the Boulder Mountains. Reported use numbers weren’t broken out by individual trips, nor was it evident whether or not they actually entered the Hemingway-Boulder Wilderness. Other than providing an average group size (4.5 people), usable data were lacking for these outfitters.

Travel by horseback in these lands, now designated as wilderness, is a traditional use with a long history. Much outfitted use is stock supported by 3 commercial outfitters in the Cecil D. Andrus-White Clouds Wilderness. There are different methods in which wilderness visitors are stock-

⁷ Wilderness rangers encountered one group with 6 people and 4 pack goats at 4th of July Lake (outside, but nearby the White Clouds Wilderness) in 2006.

guided. People can go for a day ride (7%); travel overnight with stock their entire trip (29%); take spot trips in which visitors ride in and are dropped off (30%); or hike in and have their gear dropped off, after which the stock leave (1%). Visitors may also be stock-supported for overnight hunting trips (33%). Commercially guided big game hunts occur in locations across the wilderness areas, including deer, elk, pronghorn, and bighorn sheep hunts.

These stock-supported outfitted trips serviced 246 groups in the Cecil D. Andrus-White Clouds Wilderness in the 10-year period between 2006 and 2015, for a total of 4,497 user days (averaging 450 user days per year). Drop camps typically had more clients per trip, averaging 6.8 persons. Most of the outfitted groups in the Cecil D. Andrus-White Clouds Wilderness had no more than 12 clients (96%) and 14 head of stock (90%). The average number of clients for these outfitted groups was 4.2, with an additional 1 to 4 guides per group. When guides are included in the group size, an additional 3 trips with more than 12 people occurred. Guides supplying drop camps are not included in overall group size, as they typically travel separately from their clients.

White Cloud Outfitters are the only stock outfitters with a special use permit in the Hemingway-Boulders Wilderness. During the 10-year period of 2006 to 2015, they provided 40 guided trips to the public with 462 total user days. These trips were exclusively overnight hunting trips and had an average of 2 guests with 1 to 4 guides, and generally occurred in the fall. None of these groups had more than 12 people (guides and clients) and 14 head of stock; 93% had no more than 10 people (guides and clients) and 12 head of stock.

Two campsites are assigned to stock outfitters in the Cecil D. Andrus-White Clouds Wilderness, one at Chamberlain Lake and one at Little Boulder Creek. The only assigned camp in the Hemingway-Boulders Wilderness is located on the South Fork of the East Fork River. These sites have some level of development, including tent frames, framed outhouses, jack fences, and caches with cook gear and tools. Many of these developments remain in place year-round. The Little Boulder Creek campsite received the highest outfitted use of all locations in the two wildernesses (35% or 85 trips). The second most popular site was Chamberlain Lake (17% or 41 trips). Walker Lake (8% or 24 trips) and Hatchet Lake (6% or 14 trips) were also popular destinations. Trip durations ranged from single-day to 21-day trips.

3.3.3. Environmental Effects

Direct and Indirect Effects

Alternative A—Proposed Action

The analysis presented in this Wilderness section looks at the direction presented in Chapter 2 by resource or topic and analyzes the effects of the direction to the qualities of wilderness character. Each aspect of the proposed WMP direction was considered for each indicator. For those resources or topics with no effects, they are not listed in this report. Additional detail may be found in the project record.

Resource Indicator and Measure 1: Untrammeled

In summary, the direction presented in the WMP (Alternative A) would ensure preservation of the untrammeled quality.

Wilderness

Direction proposed in the wilderness section of the WMP under Alternative A would not affect the untrammeled quality. Under Alternative A, no immediate effects from the proposed direction to use natural openings for helicopter landing areas for emergencies (Wilderness Guideline 2125) would occur. This direction may, in the long term, lead to fewer trammeling actions, as fewer cleared openings are established during emergency operations, comprising a minor benefit to the untrammeled quality.

Recreation Resources

Direction proposed in the WMP under Alternative A would maintain the untrammeled quality with respect to recreational activities. Small-scale campsite restoration and rehabilitation would continue, but the minimal soil and vegetation disruption would not intentionally control or manipulate “the earth and its community of life” inside wilderness. In a few areas, restoration may be necessary to meet new standards and guidelines. The scale of these efforts would determine whether they constitute trammeling or not.

Direction to limit new trail construction to only those circumstances determined the minimum necessary to protect wilderness character (Recreation Standard 2176) would preserve the untrammeled quality. Any new trail construction would be analyzed under site-specific NEPA and MRA.

Scenic Environment

Under the proposed action, direction would be implemented to ensure that natural events that affect scenic qualities are not considered detrimental to scenic qualities (Scenic Guideline 2197). This direction would prevent actions which may be considered trammeling (e.g., reseeding) to address natural events (e.g., a landslide or forest fire) solely to correct impacts to the scenic value. This direction would preserve the untrammeled quality.

Rangeland Resources

Under this alternative, irrigation would only be allowed where practiced prior to the designation of wilderness (Rangeland Resources Standard 21113). For the NFS portion of the two wilderness areas, this direction would have no effect, as it is existing policy (see FSM 2323.26b). For the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness this direction would be new. Irrigation is not a pre-existing activity. The direction would ensure preservation of the untrammeled quality by prohibiting future irrigation projects and associated hydrologic and vegetation manipulation.

Fire Management

Suppressing lightning-ignited wildfires removes one of the most important natural processes from fire-dependent ecosystems (Miller 2012). Deliberate decisions to suppress or actively manage a fire constitute “trammeling” actions in wilderness, which would negatively affect the untrammeled quality.

The proposed action includes a guideline (Fire Management Guideline 21131), which would preserve the untrammeled quality by ensuring potential effects to wilderness character are considered when responses to wildland fire are evaluated. This direction also helps ensure safety is not jeopardized to protect wilderness character. Similarly, having a resource advisor experienced with wilderness management (Fire Management Guideline 21134) may help to

minimize effects by ensuring the wilderness resource is considered at the same time other resource values are considered during a wildfire.

Management Zones

This alternative proposes to establish Management Zones. Zoning is a method to prevent wilderness from changing from the very wild toward the not-so-wild side of the spectrum. Zone direction includes goals, desired conditions and standards for each zone. Zones were developed based on current conditions, current visitor use levels and patterns, and desired conditions to ensure no degradation to wilderness. Zone 1 is the most primitive with the least visitation, and Zone 4 includes the most heavily used areas with existing impacts. Under Alternative A, zones would be established as outlined in Table 5.

Looking specifically at the standards for the four zones, the direction in the zone standards would not affect the untrammeled quality because the direction would not lead to intentional actions that affect the earth and its community of life.

Resource Indicator and Measure 2: Natural

In summary, the direction presented in the WMP (Alternative A) would preserve the natural quality, and the recreational use restrictions would moderately improve the natural quality.

Wilderness

Under Alternative A, the natural quality would be maintained or improved by direction requiring reseeding or replanting using locally sourced native seed or plants (Wilderness Standard 2116) and using natural openings for helicopter landings in emergency or fire operations (Wilderness Guideline 2125). Using locally sourced, native seeds or plants for projects would better protect the natural quality by reducing the risk of introducing nonnative plants and using natural openings would minimize the effects (visual and physical) resulting from clearing helicopter landing areas in wooded or heavily vegetated areas.

Wildlife Resources

Incidences of pneumonia-related die-offs in bighorn sheep are frequently associated with the presence of domestic sheep and goats (George et al. 2008, Wehausen et al. 2011). Impacts to bighorn sheep populations degrades the natural quality of the wilderness.

Under Alternative A, pack goats would be prohibited within the modified Pack Goat Exclusion Area (Wildlife Resources Standard 2155) and persons using pack goats would be required to follow 9 management practices recommended by the North American Packgoat Association (Wildlife Resources Standard 2156). Pack goat use in the wilderness areas is low, as only one group traveling with 13 goats registered in 2016, and wilderness rangers reported no encounters with packgoats in the MA from 2004 through 2015. Establishing these standards and reducing the potential for interaction between species would benefit bighorn sheep and preserve the natural wilderness quality. See sections 3.4.3.1 and 3.4.3.2 on the environmental consequences to wildlife for more information on disease transmission and other effects to wildlife.

Recreation Resources

Under Alternative A, long-term minor-to-moderate benefits could occur to natural components (streamside habitat, lakeshores, vegetation, wildlife, soils, water quality) of the wildernesses because of proposed constraints on recreational activities. “A primary goal of protected area and wilderness management is to limit the areal extent of visitor impacts, the human ‘footprint’ of

highly disturbed land. Of equal importance is limiting the severity of impact to levels that are not ecologically, managerially, esthetic, or functionally significant” (Marion et al. 2016).

Alternative A is designed to achieve this goal by managing the types and locations of use and behaviors of users.

Group Size and Packstock Management

Wilderness managers are frequently concerned with recreational impacts to natural resources; any wilderness recreational use results in some level of impact to the natural resources.

“Therefore, consistent with the goal of providing recreation opportunities, management can only limit impact, not prevent it. More consideration should be given to limiting use of wilderness that is still relatively lightly used and impacted—to see that it remains in that state” (Dawson and Hendee 2009).

In general, campsite impacts can vary based on the length of stay, the size of the party, and use of pack stock (Dawson and Hendee 2009). Stay limits would not change from current regulations under Alternative A.

Alternative A would limit group size to a maximum of 12 people (Recreation Resources Standard 2166) and a combined number of recreational stock⁸ in one group to 14 head of stock (Recreation Resources Standard 2167), effectively limiting potential effects to the natural wilderness quality. Many studies illustrate greater environmental impacts are caused by large groups compared to small groups (Anderson et al. 1998; Hall and Cole 2007; Monz et al. 2000; Dawson and Hendee 2009). These studies often conclude that group size limits can “be effective at reducing unacceptable resource and visitor experience impacts” (Anderson et al. 1998).

Impacts are evident in existing recreation sites in high-use destination areas, such as Boorn Lakes, Chamberlain Lakes, Lower Boulder Chain Lakes and Island and Walker Lakes. These areas show concentrated and heavy use impacts, including large areas of barren compacted soil, scarred or dead trees, broken stream banks or lakeshores, large fire rings, and other “improvements” such as meat poles and furniture built from logs. Within the impacted area, these sites are stabilized and resilient to use and may generally accommodate group sizes of up to 12 people. Enlargement, however, is the “most common, detrimental, ongoing change to established recreation sites” (Cole 1989a). These established sites would not likely be expanded under this alternative, as they are more capable of accommodating the proposed maximum group size.

Recreation sites in more remote, less-disturbed areas, such as Four Lakes, Slickenslide Creek above Quiet Lake, upper Boulder Chain Lakes, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes above Walker and Island Lakes, and areas above 8,800 feet where campfires are restricted (Recreational Resources Standard 2169), would benefit under this alternative from the smaller group sizes, exclusion of equine stock in certain areas, and the elimination of campfires, as sites are less likely to become established.

Reducing and limiting visitor use as proposed under Alternative A would also minimize new impacts to vegetation, soils, and wildlife resources caused by visitors expanding into new camping locations. Furthermore, restoration efforts, when needed, would likely be successful as impacts would be less severe, improving the overall natural quality in these wildernesses.

⁸ Refer to wildlife heading within this wilderness section for effects analysis related to pack goat use.

Recreational impacts, and the limited success of restoration (without intensive management practices; Spildie et al. 2000), make managing recreational stock challenging, and point to a multi-layered approach to preserve the natural quality of wilderness character while continuing to provide opportunities for stock users. For example, Dawson and Hendee (2009) recommend in their wilderness management textbook that managers permit (equine) stock use as far as a stock camp at the first lake above the valley bottom, only allowing foot traffic only beyond the first lake. Through this compromise, horse riders are provided with access to the tributary valley without opening the entire string of lakes to the impacts typically associated with stock traffic. This recommendation is included in this alternative. The direction for the equine stock 6,058-acre closure area (Recreation Resources Standard 2174) would allow stock up to Lodgepole Lake in the Boulder Chain Lakes area and Island and Walker Lakes in Big Boulder drainage. Access above these lakes would be restricted to foot traffic.

In addition to the equine stock closure areas, Alternative A includes several standards to contain and eliminate trampling impacts in sensitive areas. Areas where recreational stock are tethered or graze for the night experience impacts over a much larger area than all other recreational impacts combined (Dawson and Hendee 2009). Immediate improvement to riparian soils and vegetation would be realized by limiting tethering (Recreation Resources Standard 2170) and prohibiting grazing recreational stock (Recreation Resources Standard 2171), within 200 feet of lakes, streams, and springs and by encouraging the use of temporary containment systems and require tree-saver devices (Recreation Resources Guideline 2183).

Overall, group sizes and recreational stock management direction would protect vegetation, particularly sensitive alpine and riparian vegetation; water quality; soils; and sensitive off-trail areas closed to equine stock travel. This direction would be moderately beneficial to the natural quality.

Campfires

Campfires are a challenging issue for managers because fires are an important part of many visitors' experience. However, campfires can result in aesthetic and ecological impacts (Reid and Marion 2005), such as blackening of rocks and soil, which is one of the longest-lasting, most visible human effects to the wilderness resource. Other effects include partially burned litter, unburned food, burnt tree roots, excessive amounts of rock and ash dispersed in campsite, soil compaction, or constructed facilities (e.g., makeshift furniture such as logs cut for seats). When effects to a site are too excessive, visitors may be displaced to other sites, increasing disturbance elsewhere (Reid and Marion 2005). These effects are the "imprint of man" on the landscape specifically mandated against in the Wilderness Act (Section 2c).

Alternative A would restrict campfires above 8,800 feet, and outside 200 yards of Walker, Island, Upper and Lower Chamberlain (9,477 feet and 9,197 feet), and Boorn Lakes (Recreation Resources Standard 2169). Campfire restrictions are supported by research, which recommends prohibiting campfires at sensitive places, such as near the tree line where trees are scarce and slow-growing, to minimize environmental impacts (Cole and Dalle-Molle 1982). Campfire limitations above specified elevations protect slow-growing subalpine forests from the depletion of ecologically and scientifically important downed wood.

Specific to whitebark pine ecosystems, the rate at which firewood is consumed can easily and quickly outpace production (Cole 1989b). Campsites (and trails) in whitebark pine areas can also have a dramatic effect as impacts resulting from large groups or concentrated visitation would be long-lasting given the low resilience and low productivity of these habitats (Cole 1989b).

Managing dispersed camping in this habitat “must be especially proactive. Management must strive to avoid problems rather than deal with them after they have occurred” (Cole 1989b).

Reid and Marion (2005) found that the number of damaged trees is reduced in areas with campfire bans compared to sites with no campfire management. They identify high-elevation areas with less wood availability and production as the most appropriate areas for campfire restrictions. Under Alternative A, campfires would be prohibited at elevations above 8,800 feet, reducing areas where visitors can have campfires from the entire Hemingway Boulders Wilderness to 41% of the Wilderness and from 99% of the Cecil D. Andrus-White Clouds Wilderness to 57% of the Wilderness.

Within the campfire closure area, 70% of the sites in the Cecil D. Andrus-White Clouds Wilderness showed evidence of tree felling or damage. The campfire restriction, which would decrease firewood collection of high-elevation whitebark pine and other alpine vegetation would protect the natural quality. The proposed campfire closure area encompasses much of the whitebark habitat (botanical technical report [project record]), and areas that wilderness rangers have identified as at risk to increased impacts, including Swimm Lake, Four Lakes, and Big Boulder Lakes. Visitors wishing to have a campfire may adjust their camp locations to below the elevation limits, resulting in a positive effect on geographic distribution of visitors to sites stabilized and resilient to additional use. Overall, the campfire restrictions would be moderately beneficial to the natural quality, particularly by protecting whitebark pine.

Human Waste

Wilderness rangers regularly report ongoing human waste and sanitation issues, with increasing use and no human waste regulation in place. Alternative A could have a slightly positive effect on water quality by requiring human waste to be buried at least 200 feet from water (Recreation Resources Standard 2173), which would reduce the possibility of waste entering water systems. Disposing of human waste in cat-holes is the most common method of human waste disposal and is preferred because it avoids or reduces the negative impact of visitors encountering feces or toilet paper, animal and insect transmission of pathogens, and water contamination after rainfall (Monz et al. 2000).

Off-Trail Marking

When user-created trails begin to develop, research suggests that recreational use should either be reduced, or trails should be designated to reduce the additional proliferation of routes and impacts. However, establishing official trails in the lightly used parts of wilderness may conflict with management objectives (Dawson and Hendee 2009). Consequently, minimizing the creation of social trails by minimizing their evidence is best. Under Alternative A, visitors would be discouraged from marking off-trail routes, and markers such as stacked rocks or flagging would be removed (Recreation Resources Guideline 2180). This direction, in combination with limits on recreational equine stock use in areas without trails and a reduction in group size numbers, would reduce the risk of trampling sensitive vegetation and establishing user-created trails, thus preserving the natural quality.

Human/Wildlife Encounters

Encouraging proper food storage can help protect a variety of wildlife from habituation to humans, human food, and human interactions. Smaller animals (e.g., birds and rodents) are not as dangerous to humans as bears are when they become habituated to human food. However, habituation can profoundly affect any animal (Cole et al. 1987). Alternative A includes a

guideline (Recreation Resources Guideline 2179) to emphasize proper camping and food storage techniques to prevent habituation and effects to wildlife, thereby benefiting the natural quality by protecting wildlife.

Commercial Services

Concentrating assigned outfitter campsites (Recreation Resources Standard 2190) within Zones 3 and 4 would maintain the natural quality of the wildernesses. Maintaining existing assigned campsites, all of which occur within Zones 3 and 4, and future considerations of new outfitter and guide assigned camps within Zones 3 and 4 would ensure protection of the more pristine areas of the wilderness in Zones 1 and 2.

Direction regarding modeling wilderness practices with clients (Recreation Resources Standard 2191) would help promote awareness of wilderness values and “Leave No Trace” practices, benefiting the natural quality, and also other components, of wilderness character.

Scenic Environment

Alternative A includes direction (Scenic Environment Guideline 2197) to ensure visual conditions changed by natural events are not considered detrimental to scenic qualities. This direction would preserve the natural quality, ensuring management actions are not taken for the sake of scenic qualities following a natural event that may be otherwise considered ‘unsightly’, such as a landslide or fire.

Rangeland Resources

Alternative A includes direction that only allows irrigation where it occurred prior to wilderness designation (Rangeland Resources Standard 21113). Under this alternative, this activity could not be considered in the future within the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness, as it did not occur there prior to the wilderness designation (this direction is an existing prohibition per Forest wilderness policy [FSM2323.26b]). This direction would protect the natural quality, specifically the natural hydrology, and vegetation.

Fire Management

Lightning-ignited wildfire is a natural disturbance process that has shaped vegetation across the landscape for centuries. While there may be valid reasons to manage a naturally ignited fire within wilderness, managing naturally ignited wildfire could affect the natural quality. Under Alternative A, ensuring wilderness character is considered during management, as described in Fire Management Guidelines 21131 and 21134, would reduce the likelihood of impacts, thereby preserving the natural quality.

Lands and Special Uses

When considering proposals for special uses, direction under this alternative (Lands and Special Uses Standard 21140) would ensure the natural quality is preserved in the more pristine portions of the wilderness by aligning potential project effects within the appropriate zone.

Search and Rescue

Decisions to allow the use of motorized or mechanized equipment or vehicles affect the natural quality by cutting or trampling vegetation, introducing invasive species, or causing noise that impacts wildlife. Under this alternative, direction for SAR operations would protect natural conditions.

The flowchart proposed under this alternative (Search and Rescue Standard 21160) considers law (Wilderness Act, Section 4(c)) and policy (FSM 2326 and BLM Manual 6340 1.6.C.17) regarding the use of motorized or mechanized equipment or vehicles and condenses them into a tool for the authorized officer to quickly make a legal and prompt decision regarding whether to use motorized/mechanized equipment or vehicles for a given operation. The flow chart is not new direction but rather is designed to allow for consistent, rapid responses during emergency situations. Consistently applying this tool would allow for decisions that consider visitor safety and wilderness qualities.

The number of sites created by clearing trees would be minimized using this decision-making process and direction emphasizing the use of natural clearings for the landing of helicopters (Search and Rescue Guideline 21163). Resource damage would be mitigated or rehabilitated, and care would be taken that vehicles (if used) would not spread invasive species. By approving the use of motorized and mechanized equipment or vehicles only when essential, natural conditions would be maintained.

Management Zones

Zoning is not explicitly addressed in the Wilderness Act, but any zone direction must conform to the Wilderness Act. While all zones must be managed to ensure wilderness character is preserved, the concept of zoning acknowledges that natural resources and recreational uses are not the same across the wilderness. Due to resource diversity, uses, and conditions, some management actions and standards may be prescribed for an entire wilderness, whereas many actions or standards would apply only to particular areas, sites, or zones (Haas et al. 1987).

Most visitor use (91%) occurs in Zones 3 and 4, which means these are the areas with the highest potential for impacts to the natural quality—vegetation, soil, water quality. Conversely, Zones 3 and 4 comprise <1% of the wildernesses, which means use is very concentrated in these locations.

None of the zone standards provide direction that would affect the natural quality of wilderness character directly, except for the direction specific to signs. Each zone allows for signs to be placed for resource protection (although in Zone 1, these instances would be extremely rare). This restriction would benefit the natural quality by protecting vulnerable or impacted natural resources, such as vegetation or wildlife.

Resource Indicator and Measure 3: Undeveloped

In summary, the direction presented in the WMP (Alternative A) would ensure preservation of the undeveloped quality of wilderness character.

Wilderness

Alternative A includes direction to manage vehicle access points to prevent unauthorized use (Wilderness Standard 2117), which would preserve the undeveloped quality by reducing the likelihood of unauthorized vehicle use.

Rangeland Resources

Alternative A includes direction that would only allow irrigation where practiced prior to the designation of wilderness (Rangeland Resources Standard 21113). For the NFS lands within the two wilderness areas, this direction would have no effect, as it is existing policy (see FSM 2323.26b). Within the BLM-managed 459 acres of the Cecil D. Andrus-White Clouds

Wilderness, this direction would be new. Irrigation did not occur within this portion of the Wilderness prior to the wilderness designation. The direction would ensure preservation of the undeveloped quality from infrastructure required for these operations.

Fire Management

Direction to avoid locating temporary wildfire support in wilderness (Fire Management Guideline 21133) is established in Forest Service policy (FSM 2324.23) and would apply to most of the two wildernesses regardless of the WMP. This direction would be new for the BLM-managed portion of the wilderness. This direction would protect the undeveloped quality by avoiding the wilderness entirely, when possible. The additional clause (which is not established policy) to avoid Zone 1 and/or to use pre-existing disturbances when locating wildfire support in wilderness would ensure preservation of wilderness character, particularly the undeveloped quality.

Search and Rescue

During emergency operations within wilderness, using motorized and/or mechanized equipment or vehicles, such as helicopters, ATVs, motorcycles, wheeled liters, or motorcycles, would degrade this quality. These otherwise prohibited uses may be approved in accordance with law (Wilderness Act, Section 4(c)) and policy (FSM 2326, and BLM Manual 6340 1.6.C.17). Alternative A includes a flow chart (Search and Rescue Standard 21160), which takes direction from law and policy and condenses it into an easily navigated tool to be used by an authorized officer at time of emergency when a rapid response is needed. The flow chart would assist the decision-maker in promptly determining the necessity of motorized or mechanized use, thereby allowing responders prompt determination for means of access. Alternative A would ensure preservation of the undeveloped quality by implementing this decision flowchart. This flowchart has been in use for the Sawtooth Wilderness (also in the Sawtooth NRA and includes a portion of Blaine and Custer Counties) since 1998.

Management Zones

The goals and standards proposed for each zone are designed to avoid reacting only to problems already present. Instead, the zone direction assists in being proactive and helping to set a course toward the desired conditions. The standards for the four management zones assist with protecting and potentially improving the undeveloped quality based on the conditions that existed at the time of designation and desired conditions for specific areas of the wilderness.

The standards for Zones 1 and 2 direct managers to remove or deny installations and facilities (with exceptions for valid existing rights, grazing facilities, historic/cultural facilities, or if determined to be the minimum necessary for administration of the area as wilderness), thus preserving the undeveloped quality. Further, the undeveloped quality may be improved under this direction, if an unnecessary, pre-existing facility were removed.

Management zone standards minimize installations, such as signs. Signs may be present for two reasons: resource protection or for routing or location of the visitor. Direction for Zones 1 and 2 would only allow temporary signs for resource protection, in rare instances. This direction would preserve the undeveloped quality across most of the wildernesses. In Zones 3 and 4, signs may be placed for resource protection, and since these two zones include about 91% of the visitation, there may be a higher likelihood for resource protection signs (based on a higher potential for resource impacts from concentrated visitor use). Also, these two zones are where most of the

system trails occur, and the standards allow for occasional signs for visitors (e.g., at trail junctions).

For the above reasons, establishing zones would protect the undeveloped quality by minimizing installations in the more pristine portions of the wilderness.

Several standards and guidelines under other topic headings relate to zones and would help preserve the undeveloped quality (Wilderness Standard 2121, Recreation-Commercial Services Standard 2191, Fire Management Guideline 21133, and Lands and Special Uses Standard 21140) across the wildernesses. Also see the “Wilderness”, “Commercial Services”, “Fire Management” and “Lands and Special Uses” sections.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

In summary, the direction presented in the WMP (Alternative A) would lead to mixed outcomes that both improve and degrade opportunities for primitive and unconfined recreation. Overall, this alternative would lead to a moderate degradation to this quality from the proposed recreational use restrictions

Wilderness

Direction to minimize the unauthorized vehicle use (Wilderness Standards 2117) would not affect unconfined recreation, but would improve opportunities for primitive recreation, as routes on the landscape are considered facilities that would reduce self-reliant recreation.

Wildlife Resources

Restrictions on visitor use, such as limiting access to specific locations, limiting access at specific times, limiting certain activities, or limiting the stay duration, reduce the freedom of the visitor, which is a component of primitive and unconfined recreation (Anderson et al. 1998).

Alternative A includes 26,773 acres (29%) of the Cecil D. Andrus-White Clouds Wilderness where pack goats would not be allowed. This area is the core use area of the East Fork bighorn sheep herd from spring through fall. Approximately 6.4 miles of trail fall within the closure area and would no longer be available to pack goat users (see details in Appendix 1). This area restriction would impact opportunities for primitive and unconfined recreation for pack goat users within this area. However, visitation by pack goat users is estimated to be quite low. Between 2004 and 2016, wilderness rangers documented encounters with visitors while on patrol, and no groups with pack goats were encountered. Based on 2016 registered use between the two wildernesses, only one group with pack goats registered with 4 people and 9 goats and a destination of Slide Lake.

A substantial overlap exists in the area where equine stock would be prohibited under this alternative; however, pack goat use would be allowed in the Boulder Chain Lakes and Slickenslide Creek areas, whereas equine stock would not.

In the remaining portion of the Cecil D. Andrus-White Clouds Wilderness outside the Pack Goat Exclusion Area and within the entire Hemingway-Boulders Wilderness, pack goat users would be required to adopt certain measures for handling goats. Pack goat users may be familiar with the North American Packgoat Association’s measures (best management practices) and may voluntarily adopt these practices for reducing risk. However, the group size limit of 9 pack goats per group, or 3 goats per person, would negatively affect users wishing to have a larger group. These additional regulations (the 9 measures for reducing contact) constitute additional impacts

upon a visitor's freedom of choice, creating a complex layering of regulations for the pack goat user.

While this alternative would implement various restrictions on pack goat use, continued use in the remaining portions of the wildernesses preserves the primitive quality of wilderness character. Using pack animals preserves the feelings of self-reliance, allowing users to travel to remote places.

Recreation Resources

A visitor's perception of recreating in an unconfined setting would be impacted by decisions that reduce visitor and stock group sizes, further restrict campfires, regulate the use of pack goats, constrain where stock can be grazed and tied, and limit where equine stock can travel. Spildie and others (2000; p. 99) state,

One of the goals of wilderness recreation management is to avoid ecological impacts and provide opportunities for high-quality wilderness experiences. Another goal—which often conflicts with the former—is to provide access for these experiences and to avoid restriction and regulation, which can make experiences seem 'confined.' Conflict between these two goals usually results in some compromise of both.

Group Size and Packstock Management

Wilderness visitors value independence and freedom, thus, rules and restrictions reducing independence and spontaneity affect visitor use and experience. Minor to moderate negative impacts to opportunities for primitive and unconfined recreation would result from increased regulation. Specifically, Alternative A would limit group size to 12 people and recreational stock to 14 animals⁹ (Recreation Resources Standards 2166 and 2167).

Alternative A would also impose regulations for managing recreational stock when tethering and grazing (Recreation Resources Standards 2170 and 2171) and would establish separate and overlapping areas where pack goats and equine stock would be prohibited (Recreation Resources Standard 2174).

As noted above, the goal of recreation management in wilderness is to avoid effects to the natural quality while allowing for visitor use and wilderness experiences. Education and regulation are the primary tools used to meet this goal. Typically, when education is ineffective, regulations may be established to protect natural features, preserve opportunities for solitude, and protect the primitive and undeveloped qualities of the area.

The magnitude of the effect of these restrictions on a visitor's sense of freedom may vary greatly depending on the degree of imposition or inconvenience the restriction has on the visitor and its duration and geographic extent. For instance, research has shown that visitors typically strongly oppose restrictions on day use (Hall et al. 2010). Other management actions, such as voluntary registration or prohibiting shortcutting of trails do not present substantial confinement of the visitor.

Acceptability of group size limits varies. Watson (1993) found that most users supported limiting group size and suggested a group size maximum of 10 people. Further, Martin and others (2009)

⁹ Refer to wildlife heading within this Wilderness section for effects analysis related to pack goat use.

summarize several studies and found that visitors are acceptable of restrictions, such as group size limits, “especially when such restrictions help improve or preserve social and/or resource conditions.” A 2004 study in the Bob Marshall Wilderness complex found 57% of visitors felt that limiting group size to a maximum of 12 people was desirable, and an additional 6% found the limit desirable only in the more heavily used parts of the wilderness (Whitmore et al. 2004).

The standard for group size would ensure that encounters with large groups are reduced, although people who prefer to travel with a larger party size would need to adopt different strategies, such as breaking into smaller groups or choosing a different location for their visit. Since most visitors travel in groups of less than 12 in the wildernesses, this restriction is not expected to affect or displace many parties.

Based on information collected from trailhead registers in 2016 and wilderness ranger reports since 2004, the proposed group size limits would include most parties generally encountered within the 2 wildernesses, thereby accommodating most of visitor use. Visitors traveling with more than 12 people in a group accounted for <1% of total use. Further, <1% registered as traveling with recreational stock, with average group sizes of about 4 people and 4 head of stock. No groups registered as having more than 10 head of stock.

Some users, however, may be displaced to areas outside the wilderness. Popular areas outside of wilderness, such as Fourth of July and Washington Lakes, Warm Springs Meadows, Casino Lakes, and the Frog Lake Loop remain available for those wishing to travel in larger groups or those wishing to avoid other restrictions proposed under Alternative A.

In addition to accommodating most ongoing visitor use, this group size restriction is practical due to limited grazing areas and campsites that could accommodate larger groups. Communicating the group size restrictions would be simplified as they would be consistent with the nearby Sawtooth Wilderness, which is also managed by the Sawtooth NRA.

Groups larger than the proposed party size restrictions who wish to access wilderness with a commercial service provider would not be able to do so. In the Cecil D. Andrus-White Clouds Wilderness, reported use by outfitter and guides (2006–2015) shows that 6% of groups had more than 12 people, and 10% of groups over that period had more than 14 head of stock. Conversely, no outfitter and guides reported use over the 2006–2015 period in the Hemingway-Boulders Wilderness that would have exceed the proposed groups size limits.

Recreational Stock Restrictions

Recognizing that the damage caused by recreational stock is generally much greater than that caused by hikers, and a very small proportion of visitors (<1% of registered visitation and outfitted use) benefit from or are associated with this impact, confinement of stock impacts (limiting where they can go) offers a reasonable compromise between providing stock users access to wilderness and confining the heavy impacts typically associated with stock use.

Visitors traveling with recreational stock would continue to have opportunities to travel on many maintained trails and in untrailed areas. Alternative A would prohibit equine stock use in 5 drainages (6,058 acres; 7% of the Cecil D. Andrus-White Clouds Wilderness). Managers have historically posted signs discouraging stock use above Lodgepole Lake to protect fragile vegetation. Under this alternative, 1.95 miles of Boulder Chain Lakes Trail 683 above Lodgepole Lake would also be closed to equine stock use.

These limits would affect recreational stock users traveling on and off-trail with horses and mules and would minimally affect the geographic distribution of stock users as most of these areas present topographic challenges and have not been frequently used by stock users, as evidenced in part, by the small number (7%) of recreation sites in the proposed closure area showing evidence of stock use.

Within the proposed equine stock closure area, only 7% of recreation sites (4 of 61) showed evidence of stock use (manure, feed, or tree damage), as compared to 21% of recreation sites (46 of 224) across the Cecil D. Andrus-White Clouds Wilderness. Of the 4 sites located within the closure area, 3 exhibit moderate impacts and 1 exhibits extreme impacts.

The restriction would have a positive effect on the experience of visitors who prefer to travel in areas without signs of stock use. On the other hand, those who wish to travel with their horses and mules in some remote parts of the wilderness would be negatively affected.

Under Alternative A, outfitters would also be prohibited from using horses or mules within the equine closure area. Assigned camps and other sites commonly used by outfitters are outside of the closure area, which would minimize direct effects on outfitters using those areas. Yet, outfitters would still be negatively affected, as would any clients wishing to be outfitted or guided into the closure area using equine stock.

A visitor's sense of freedom from managerial controls would be negatively affected under this alternative as portions of the Cecil D. Andrus-White Clouds Wilderness would be closed to equine stock use. Given the low equine use estimated in these areas, and the small portion of the wilderness encompassed by the restriction, the overall impact on this user group is anticipated to be low to moderate.

The standards for minimizing riparian damage by restricting tethering or grazing adjacent to water sources (Recreation Resources Standards 2170 and 2171) are also policies that would impact a recreational stock user's opportunity for unconfined recreation, although minimally.

Overall, under this alternative, opportunities for a primitive and unconfined recreation would be moderately, negatively affected for recreational stock users.

Campfires

Campfires are an especially challenging issue for public land managers because fires remain an important aspect of the camping experience, despite recent findings that show an increasing preference for cook stoves (Christensen and Cole 2000). An unregulated campfire policy maximizes a visitors' ability to enjoy a campfire, but impacts such as site proliferation and tree damage could be high.

Reid and Marion (2005), in their review of literature, concluded that campfire bans weren't necessarily effective in deterring visitors from building campfires or damaging trees; however, poor communication of policies may have been a factor. Based on the findings, they suggest management approaches should be based on specific area objectives and may vary by management zone. For example, permanent campfire bans in areas with insufficient wood production, such as in alpine elevations, are prudent and more easily justified.

The Maroon Bells-Snowmass Wilderness in Colorado recently changed to an elevation-based campfire closure. Wilderness rangers documented a substantial increase in compliance with the

elevation-based closure versus a “tree line” or site-by-site closure. This success was somewhat attributed to the ease for visitors to understand the regulation (Nelson 2017).

Proposed campfire restrictions in the wildernesses would include elevations above 8,800 feet, and outside of 200 yards of Walker, Island, Upper and Lower Chamberlain (9,477 feet and 9,197 feet), and Boorn Lakes. Recreational campfires would be restricted on 78,709 acres: 40,124 acres (41%) in the Hemingway-Boulders Wilderness and 38,585 acres (57%) in the Cecil D. Andrus-White Clouds Wilderness. Many of the lakes in the Cecil D. Andrus-White Clouds Wilderness have been closed to campfires with varying success since 1996.

The restrictions would prohibit campfires in about half of the wildernesses and would affect the primitive unconfined opportunities within the wildernesses. However, many of the popular, heavily used, and resistant sites would remain open to campfire use. In general, people tend to have more campfires in sites along trails than in trail-less areas (Martin and Blackwell 2013), and much of the area encompassed by the restriction is in the trail-less portions of the wildernesses.

Opportunities for primitive and unconfined recreation are not required on every acre within the wilderness, and visitors wishing to camp with fire may adjust their planned routes and destinations to accommodate this restriction. Overall, this restriction would likely have moderate, negative impacts on primitive and unconfined recreation within the wildernesses.

Human Waste

The requirement to bury human waste under this alternative is a generally accepted technique (Cilimburg et al. 2000). While it is a management restriction on visitor behavior, it is a common recreation practice and of little impact on the visitor and their sense of freedom. When human waste is buried appropriately, not only is water quality protected, but visitor experience also improves.

Off-Trail Marking

Discouraging the public from marking off-trail routes may constrain some visitors, negatively affecting their feeling of freedom, while removing these markers would improve the primitive aspect of this quality, allowing users the challenge of discovering their own routes.

Permits

Under this alternative, users would be encouraged to continue voluntarily signing in at a trailhead registration box. Users are accustomed to registering at trailheads so no change to their primitive and unconfined experience from status quo would occur.

Commercial Services

Section 4(c) of the Wilderness Act prohibits structures and installations in wilderness. The direction specific to structures (Recreation-Commercial Services Standard 2189) would apply to the FS portion of the wilderness regardless of the wilderness plan, as it is established in policy. While the listed BLM policy (BLM H-2930-1, BLM 6340 B.2.(i).) alludes to managing outfitter and guide structures, the WMP direction would essentially be new direction for the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness. Reducing the duration of commercial outfitter installations and structures would improve the opportunities for primitive and unconfined recreation by minimizing facilities that reduce self-reliant recreation. This direction would continue to allow for realization of recreational experiences through guided activities, while minimizing the impacts from structures or installations on wilderness character.

Zones 3 and 4 were mapped to ensure all existing assigned outfitter and guide camps were within these zones. Standard 2190 ensures that any future assigned camp would be within those two zones to protect the opportunities for primitive recreation and desired conditions for Zones 1 and 2.

Management Zones

The agencies identified most of the wilderness as Zone 1, where visitors may have the greatest opportunity for primitive recreation away from trails, trail signs, and established campsites. Thus, preserving opportunities for primitive recreation across the wildernesses as they existed at the time of designation. However, conditions at the time of designation also included areas of heavy visitor use, concentrations of campsites with varying levels of impact, and popular destinations along system trails.

Establishing zones recognizes the spectrum of opportunity for primitive recreation across the wilderness at a site-specific level. The zone direction provides guidance to preserve these opportunities within each zone, such as direction for trail classes or no system trails. Overall, zone direction would benefit opportunities for primitive and unconfined recreation by protecting the opportunities as they existed across each wilderness at the time of designation.

Resource Indicator and Measure 5: Opportunities for Solitude

In summary, the direction presented in the WMP (Alternative A) would result in moderate improvement to solitude.

Wilderness

Remoteness from sights and sounds of human activity inside the wilderness is a component of opportunities for solitude. This component can be affected by encountering artificial clearings, as would be constructed for helicopter landings. Emphasizing use of natural openings for helicopter landings (Wilderness Guideline 2125) would minimize these impacts in the long term and preserve opportunities for solitude.

Wildlife Resources

This alternative includes an area (29% of the Cecil D. Andrus-White Clouds Wilderness) where pack goat use is prohibited (Wildlife Resources Standard 2155). Opportunities for solitude may negligibly improve in the pack goat closure area as this use is removed, leading to fewer visitor encounters. However, pack goat use within the wilderness is very low: only one group with pack goats registered in 2016 and no groups were encountered by wilderness rangers from 2011 through 2016. This reduction in encounters (improvement to opportunities for solitude) would be extremely minor and would occur at the expense of opportunities for primitive and unconfined recreation (see above) for the pack goat user.

Recreation Resources

The Wilderness Act (Sec.2(c)) mandates the preservation of naturalness by its definition of wilderness as an area that “generally appears to have been affected primarily by forces of nature with the imprint of man’s work substantially unnoticeable.” Management actions that reduce the evidence of human presence (e.g., campsites without vegetation, fire scarred soils and rock, trees damaged by recreational stock and firewood gathering, unauthorized user-created routes, human waste and trash, and lakeshore damage from grazing) improve a visitor’s sense of remoteness and feelings of solitude. By designating areas without campfires, removing markings on

unauthorized trails, requiring proper disposal of human waste, and managing recreational stock use, Alternative A would protect a visitor's opportunity to experience wilderness in its natural state; thus, improving opportunities for solitude.

Group Size, Packstock Management, and Campfires

A visitor's sense of solitude and perception of risk, self-discovery, self-reliance, and remoteness from human civilization are affected by conflicts with other visitors, the presence of others, and the behavior of those visitors. According to research by Marion and others (1993) encounters with different types of visitors (e.g., large groups) with different styles of use (e.g., horse users) may affect visitors' experiences more than the sheer numbers of other parties. Such unwanted encounters often are one-sided effects to one type of visitor. For example, when hikers respond negatively to encounters with stock and the effects resulting from their use (e.g., waste on trails and campsites, insects, damage to vegetation).

Although large parties are a small percentage of use in the two wildernesses, their presence diminishes other visitors' experiences (Cole et al. 1995). User conflicts and evidence of use would be improved by the proposed group size reductions, restrictions in equine stock use in 6,058 acres of the Cecil D. Andrus-White Clouds Wilderness, and campfires above 8,800 feet, as the policies would reduce encounters, sights and sounds of other people. Encounters in the more remote, interior areas are more troubling to visitors than areas closer to the edge of the wilderness (Stankey 1973). The equine stock closure and campfire restrictions areas are in more remote portions of the wilderness where visitors have a high expectation for solitude.

Horse use and campfires often produce the most conspicuous impacts in a wilderness. Tree damage, trampling overgrazing may diminish a visitor's perception of naturalness. Actions to reduce impacts to the natural quality would improve opportunities for solitude. For example, restricting campfires in remote areas, and the confinement of equine stock impacts by eliminating their use in some remote areas and regulating recreational stock grazing within 200 feet of lakes, streams, or springs may improve visitors' wilderness experience and sense of solitude.

Whitebark pine are iconic in these high-elevation wilderness areas and their aesthetics contribute to a sense of wildness and isolation. Reduced impacts from campfire use to these trees would preserve this experience. Campfire evidence is present in 89% of campsites in the two wildernesses. Eliminating the visual effects of campfires, such as smoke, flame, blackened rocks and soil, campfire rings, and damaged trees, in remote areas would improve opportunities for solitude.

Human Waste

Under Alternative A, implementing requirements for the burial or removal of human waste would have a positive effect on solitude by eliminating the aesthetic concerns of encountering feces or toilet paper in the backcountry.

Commercial Services

Remoteness from sights and sounds of human activity inside the wilderness is a component of opportunities for solitude. This remoteness is affected by encountering structures or impacts from other visitors within wilderness, including campsite structures such as tables, chairs, or corrals. The Standard specific to structures for commercial services (Recreation-Commercial Services Standard 2189) would apply on the NFS lands within the wilderness areas regardless of the

WMP, as those restrictions are established in policy (FSM 2323.13g). This direction would minimize, to one season or less, the duration of any future structures related to outfitter and guide operations on the BLM-managed portion of the wilderness, thereby preserving opportunities for solitude.

Scenic Environment

Facilities and structures in wilderness represent obvious evidence of human presence; however, rare situations exist where they are necessary for resource protection. Current direction for scenic values is to manage for the Visual Quality Objective (VQO) of preservation, with no evident management activities except for very low visual-impact recreation facilities, such as stock ties and trail structures. Alternative A would limit visual impacts to visitors by providing management direction for the use of natural materials, designed to blend in with the natural environment (Scenic Environment Guideline 2196). These limitations would protect opportunities for solitude by minimizing the visual presence of facilities.

Also, Alternative A includes direction that visual conditions changed by natural events and processes would not be considered detrimental to scenic qualities (Scenic Environment Guideline 2197). This direction would preserve the apparent naturalness of the landscape, enhancing visitor experience and sense of remoteness.

Rangeland Resources

Irrigation facilities could impact opportunities for solitude by increasing the sights of human occupation of the wilderness. Under this alternative, direction prohibiting irrigation where it did not occur prior to designation (Rangeland Resources Standard 21113) would be established. For the NFS lands within the two wilderness areas, this direction would have no effect, as it is existing policy (FSM 2323.26b).

For the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness, irrigation did not occur prior to designation; therefore, any future proposals for irrigation would be denied under this direction. This prohibition would preserve opportunities for solitude by removing the potential for this form of development.

Fire Management

Alternative A proposes direction to avoid locating fire support in wilderness. If locating fire support in wilderness is necessary, then it should be avoided within Zone 1 (Fire Management Guideline 21133) using MIST, resource advisors, and restoring disturbances (Fire Management Guideline 21134). This direction would benefit opportunities for solitude by minimizing the sights and sounds of human presence and disturbance within the wilderness, thus maintaining opportunities for solitude.

Lands and Special Uses

Lands and special use proposals (Land and Special Uses Standard 21140) would maintain opportunities for solitude by minimizing sights and sounds of human activity within the more pristine zones, in line with the desired conditions for each zone. However, if installations or obvious activities are authorized in Zones 3 or 4, effects to a visitor's sense of remoteness could occur. With higher visitation in Zones 3 and 4, a visitor's exposure to special land uses, such as installations or associated activities, would increase. Depending on the type of special use project proposed and where it is approved to be placed, this direction may aid preservation or lead to

degradation of opportunities for solitude, which would be analyzed at a site-specific level in an MRA.

Search and Rescue

No SAR operations occurred in the wildernesses in 2016 (the first full year following designation), and pre-designation data are not available. However, managers estimate one SAR operation with motorized use occurs annually. Implementing the flow chart (Search and Rescue Standard 21160) would not directly affect opportunities for solitude. Indirectly, by allowing only the necessary use of motorized or mechanized emergency response, this direction would maintain opportunities for solitude. Similarly, implementing direction to use natural openings for helicopter landing areas and promptly addressing any resource damage resulting from SAR operations (Search and Rescue Guideline 21163) would also minimize the sights and sounds of human activity and presence within the wilderness.

Management Zones

The zone descriptions provide the transition from descriptions of existing condition to prescriptions for future conditions in specific areas. Through zoning, the intent is to allow for continued high recreational use in Zones 3 and 4, while preventing all areas of the wildernesses from sliding toward the same high level of use and lower level of opportunities for solitude.

Within the Cecil D. Andrus-White Clouds Wilderness alone, 224 campsites are identified, of which 206 (or 92%) occur in Zones 2, 3, or 4. These three zones comprise <3% of the wildernesses. In general, zone direction would help protect the opportunities for solitude across the wildernesses by minimizing the sights (impacts, developments) and sounds of other people within Zone 1. This restriction maintains the outstanding opportunities for solitude, as were present at the time of designation, across most of the two wildernesses.

Alternative B—Natural-Focus

Resource Indicator and Measure 1: Untrammelled

In summary, the direction presented in Alternative B would be the same as presented in Alternative A.

Wilderness, Recreation Resources, Scenic Environment, Rangeland, Fire Management, Lands and Special Uses, Search and Rescue and Management Zones

The effects of Alternative B on the untrammelled wilderness quality for wilderness, recreation, scenic resources, rangeland, fire management, lands and special uses, SAR, and management zones would be the same as described for Alternative A.

Resource Indicator and Measure 2: Natural

In summary, the direction presented in Alternative B would preserve and potentially lead to substantial improvement to the natural quality.

Wilderness, Commercial Services, Scenic Environment, Rangeland, Fire Management, Lands and Special Uses, Search and Rescue, and Management Zones

The effects of Alternative B on the natural wilderness quality for wilderness, commercial services, scenic resources, rangeland, fire management, lands and special uses, SAR and management zones would be the same as described for Alternative A.

Wildlife Resources

Prohibiting pack goats from the two wildernesses would reduce the risk of disease transmission in the MA, therefore protecting bighorn sheep populations and the natural quality. See sections 3.4.3.1 and 3.4.3.2 on the environmental consequences to wildlife below for additional information on disease transmission and other effects to wildlife.

Recreation Resources

Group Size and Packstock Management

Under Alternative B, group sizes would be limited to a maximum of 8 people in Zone 1, and a maximum of 12 people in Zones 2, 3, and 4. For recreational stock, the maximum allowable group size would be 10 animals in Zone 1, and a maximum of 14 animals in Zones 2, 3, and 4.¹⁰

As described under the effects for Alternative A, as group size increases, effects to biophysical resources (e.g., soil and plant communities) also increase (Cole 1983, Cole et al. 1997, Anderson et al. 1998, Cole 2000, Monz et al. 2000). Large groups cause impacts in and around campsites, when traveling off-trail, and near water.

The group sizes vary by zone under Alternative B to protect the less-used, more pristine portion of the wildernesses located in Zone 1. Research has shown that larger group sizes have greater impacts in the pristine, less-disturbed areas than smaller groups (DeLuca et al. 1998, McEwen et al. 1996, Leung and Marion 2000). And, groups with equine stock tend to have greater impacts (e.g., soil erosion, tree damage) than hiker-only groups (Leung and Marion 2000, Cole 1983). In fact, trampling from horses can impact an area 8 times more from hikers (Dawson and Hendee 2009), and this impact is longer lasting in less resilient environments, such as alpine areas (Hartley 2000). Further, restoring damage is very difficult, pointing to the need to prevent damage before it occurs by reducing group sizes in the pristine, less-used areas of a wilderness (Spildie et al. 2000).

Group size limits would reduce pressure on natural resources. Disturbances caused by human and recreational stock presence would continue to exist; however, additional negative effects beyond the existing condition would not be expected. Existing trails and some campsites could accommodate the group sizes proposed under this alternative without additional impacts and without site expansion.

The zoning approach to group size limits, as described under this alternative, would protect most of the wilderness areas by reducing the group sizes in Zone 1 while continuing to allow slightly larger groups within the areas with established campsites and trails that can better accommodate the larger sizes. These group size limits would allow for moderate beneficial effects to the natural quality.

The various other standards and guidelines (locating recreational stock handling areas away from water sources, restricting equine stock use in certain areas, and minimizing impacts to live trees when tying stock outside of camp) would be the same as under Alternative A, benefiting the natural components, including water quality, soils, and vegetation.

¹⁰ Refer to wildlife heading within this Wilderness section for effects analysis related to pack goat use.

Recreational Stock Use Restrictions

This alternative includes an equine stock closure area to protect fragile alpine soils and vegetation, including sensitive whitebark pine trees, riparian processes, and aquatic biota. Limiting where equine stock can go confines stock-related impacts and offers a reasonable compromise between providing horse riders with access to wilderness and confining the heavy impacts typically associated with recreational stock use (Dawson Hendee 2009). Much of the proposed area is already prohibitive for stock access due to extremely steep, rocky terrain.

This alternative differs from Alternative A by including the entire Slickenslide Creek drainage below and above Quiet Lake, in the closure area. In conjunction with group size reductions, Alternative B would protect vegetation; water quality; soils; and sensitive off-trail areas in an additional 1,232 acres that would be closed to equine stock use. This direction would be moderately beneficial to the natural quality.

Campfires

By only allowing campfires within Zones 3 and 4 (1,110 acres), Alternative B would protect alpine vegetation, specifically whitebark pine, and minimize general campfire effects (e.g., site establishment, trampling of vegetation, tree damage) across most of each wilderness. As noted above under Alternative A, campfire restrictions are supported by research (Cole and Dalle-Molle 1982). Campfire limitations would protect slow-growing subalpine forests from depletion of ecologically and scientifically important downed wood, such as whitebark pine. Further, impacts to riparian vegetation would decrease and down and dead wood density could increase, which could increase overall soil productivity supporting resilient native vegetation communities and wildlife habitat. Where allowed, campfire use would continue to impact recreation sites.

Alternative B differs from Alternative A in that campfires would be allowed in only 1% of the two wildernesses. Under Alternative A, campfires would be allowed 41% of the Hemingway-Boulders Wilderness and 57% of the Cecil D. Andrus-White Clouds Wilderness. Therefore, Alternative B would better protect whitebark pine across the wilderness areas while still allowing campfire use in the areas that receive approximately 90% of visitor use. Overall, campfire restrictions would pose a moderate-to-high beneficial effect to the natural quality.

Resource Indicator and Measure 3: Undeveloped

In summary, the direction presented in Alternative B would be the same as discussed under Alternative A.

Wilderness, Recreation Resources, Commercial Services, Scenic Environment, Rangeland, Fire Management, Lands and Special Uses, Search and Rescue, and Management Zones

The effects of Alternative B on the undeveloped wilderness quality for wilderness, recreation, commercial services, scenic resources, rangeland, fire management, lands and special uses, SAR, and management zones would be the same as described for Alternative A.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

In summary, the direction presented in Alternative B would result in substantial impacts to opportunities for primitive and unconfined recreation, particularly for equine and pack goat users, and outfitted groups.

Wilderness, Commercial Services, Scenic Environment, Rangeland, Fire Management, Lands

and Special Uses, Search and Rescue, and Management Zones

The effects of Alternative B on opportunities for primitive and unconfined recreation for wilderness, commercial services, scenic resources, rangeland, fire management, lands and special uses, SAR, and management zones would be the same as described for Alternative A.

Wildlife Resources

Opportunities for primitive and unconfined recreation for pack goat users would be eliminated under this alternative as this form of primitive recreation would be prohibited in both wildernesses to protect bighorn sheep from the potential for disease transmission. While use estimates based on visitor data indicate very low use by this group (one registered group in 2016 in the Cecil D. Andrus-White Clouds Wilderness), pack goat users would be highly impacted. Excluding an entire user group would displace that use elsewhere, depriving pack goat users the opportunity for wilderness experience in these two areas.

Recreation Resources

Wilderness protection provides the visitor an opportunity to experience unconfined recreation in undeveloped, primeval and natural conditions. In an ideal world, these objectives would align. Unfortunately, recreation leaves a footprint on and can affect wilderness lands. Visitor impacts threaten to compromise wilderness management mandates for preserving and sustaining high quality natural environments and recreational experiences. Cole and McCool (2000; p. 1) state the following:

Managers must seek a balance between the provision of access for visitors and protection from the problems associated with that visitation. They are challenged to find management approaches that maintain the sense of freedom, solitude, spontaneity, risk, and challenge that are considered fundamental to wilderness experiences. The ideal wilderness setting, where visitors have free access, experience minimal behavioral restrictions, and find undisturbed and uncrowded conditions is not always attainable. Managers must often choose among these desirable attributes. Resulting decisions—to deny access, restrict behavior, or allow further degradation—are always controversial.

A principle goal for managing wilderness visitation is to prevent avoidable effects and minimize those that are not. To achieve this goal, wilderness managers must effectively educate and regulate visitors while protecting all qualities of wilderness character.

Group Size and Packstock Management

Under Alternative B, group size would be limited to a maximum of 8 persons and 10 head of stock in Zone 1, and a maximum of 12 persons or 14 head of stock in Zones 2, 3, and 4. Zones 2, 3, and 4 include the destinations where the most (over 95%) visitor use occurs. The impacts to visitors in these zones would be the same as under Alternative A: people who prefer to travel with a larger party size would need to adopt different strategies, such as breaking into smaller groups or choosing a different location for their visit. The impacts to these user groups may be moderate (if they can split up) to high (if they are displaced elsewhere).

Since most visitors travel in groups of less than 12 in these wildernesses, this restriction is not expected to affect or displace many parties. Based on information collected from trailhead registers in 2016 and wilderness ranger reports since 2004, visitors traveling with more than 12 people in a group counted for <1% of the total use. Also, <1% of groups registered as traveling with recreational stock, with average group sizes of about 4 people and 4 head of stock. No groups registered as having more than 10 head of stock per group.

In Zone 1, however, the group size would be further reduced under this alternative to a maximum of 8 persons and 10 head of stock. Based on registration data from 2016, only 4% of groups registered with more than 8 people. Of these groups, the primary destinations were Chamberlain Lakes (18%), Boulder Chain (21%), Murdock Creek (21%), and Boorn Lakes (18%); none of these destinations are located within Zone 1. Only one group of over 8 people indicated a destination (Blackman Peak) in Zone 1. While groups may not have indicated a Zone 1 destination, visitors may—and likely do—visit Zone 1 areas by simply walking off-trail a short distance.

Cole and others (1987) have noted that party size limits larger than 10 people would likely have little social consequence, as median group sizes tend to be around 4 people. They continue that selecting a group size limit requires judgement, and no magical formula exists for determining the ideal number; however, group sizes of more than 10 people tend to have little ecological or social benefit. Conversely, for groups wishing to travel in larger groups, the effects of the smaller group size limits would be high.

The complexity of the group size restriction under this alternative is high and more onerous on the visitor. Administration of the varying group size restrictions would also be more difficult for the agencies. Over a relatively short distance, 3 or 4 varying group size limits would be in place from outside to inside the wilderness. Information would need to be conveyed regarding not only the group size limits, but also the spatial component of where they are established on the ground.

Groups larger than the allowed limits who wish to access wilderness with a commercial service provider would not be able to do so. In the Cecil D. Andrus-White Clouds Wilderness, outfitted use from 2006 through 2015 reported 1% of groups (clients and employees¹¹) with more than 12 people, and 10% of groups had more than 14 head of stock. However, a higher proportion of outfitted/guided groups during that time were greater than 8 people (8%) and 10 head of stock (22%), as proposed for Zone 1. In the Hemingway-Boulders Wilderness, 5% of the use would be affected by the Zone 1 group size limits and no groups would be affected, based on past use, by the limits for Zones 2, 3, and 4 (Table 7).

Table 7. Outfitter and guide reported use (2006–2015) that exceeds group size under Alternative B for people and stock-supported services

Alternative B Groups Size Limits			Cecil D. Andrus-White Clouds Wilderness		Hemingway-Boulders Wilderness	
Zone	People (maximum)	Stock (maximum)	Reported use over the Proposed Limit (People)	Reported use over the Proposed Limit (Stock)	Reported use over the Proposed Limit (People)	Reported use over the Proposed Limit (Stock)
Zone 1	8 people	10 head	8% (20 groups)	22% (49 groups)	5% (2 groups)	5% (2 groups)
Zones 2, 3, 4	12 people	14 head	1% (3 groups)	10% (22 groups)	None	None

Other outfitters and guides provide support for skiing and climbing activities in the wildernesses. From 2006 through 2015, these groups averaged 4.5 people per group, with some groups, which had 15 to 16 people (uncertain how many groups) exceeding the proposed 8- or 12-person group

¹¹ These calculations exclude drop camp support. In drop camp situations, the employees travel separately from, and do not camp with clients.

size limit. However, as noted in the “Affected Environment” section, available data don’t allow for more detailed analysis nor are they certain what percentage of this use entered the wilderness.

The group size restriction would impact 8% to 22% of outfitted use based on these historic use numbers, which could impact their operations. Clients would have to adjust their group sizes, particularly when traveling in Zone 1, or their destination, with some groups being displaced to outside the wildernesses. For example, some groups may travel and camp in Zones 2, 3, or 4, with their larger groups (9–12 people), and then would be required to split into smaller groups when traveling in Zone 1.

Under Alternative B, the impact to unconfined recreation for general visitors would be low, as most groups are within the groups size limits. Impacts to unconfined recreation for outfitters and guides and their clients would be moderate, given the percentage of historic use that would be affected by the more restrictive Zone 1 group size limit.

Recreational Stock Use Restrictions

As described under the resource indicator and measure 2 (natural quality) above, damage caused by recreational stock use is generally much greater than that caused by hikers. While only a very small portion (<1% based on 2016 register data) of visitors use stock, horseback riding and use of pack stock are traditional uses of the area and are intimately connected to western culture. A larger equine stock closure area is proposed under Alternative B than Alternative A, to protect fragile alpine and riparian vegetation. Additionally, some of the trails and terrain are inherently limiting to stock because of the steep and rocky landscape.

Under Alternative B, the equine stock closure area would be larger (7,290 acres) than under Alternative A (6,058 acres). The closure area would encompass 8% of the Cecil D. Andrus-White Clouds Wilderness (compared with 7% under Alternative A) and 16 more dispersed recreation sites than Alternative A. Within the proposed closure area, only 5% of recreation sites (4 of 77) showed evidence of recreational stock use, which further illustrates the low level of stock use at sites within the proposed closure area.¹²

Similar to Alternative A, this alternative would impose regulations for managing recreational stock when tethering and grazing (Recreation Resources Standards 2170 and 2171) and would establish separate and overlapping areas where pack goats and equine stock would be prohibited (Recreation Resources Standard 2174). The closure area to equine stock use would include an additional 1232 acres and 0.7 miles of Boulder Chain Lakes Trail 683 above Lodgepole Lake (see Appendix 3). Historically, managers have posted signs discouraging horses above this area because of the challenging terrain and to protect fragile vegetation. Under Alternative B, equine stock use would also be prohibited in the Slickenslide Creek drainage encompassing Quiet Lake, Noisy Lake, and Shallow and Scree Lakes. Stock access is already severely limited in this drainage as travel is extremely difficult due to the steep, challenging topography and lack of trails.

While stock use is high for outfitters and their clients, it is extremely low (>1% of visitors) in the Cecil D. Andrus-White Clouds Wilderness; thus, the potential impact to these users would be moderate. Restricting access to this portion of the Cecil D. Andrus-White Clouds Wilderness to equine stock use may appear inconsequential, as it only encompasses 8% of the Wilderness. However, this area includes a substantial portion of the central lake areas of the Wilderness.

¹² Refer to wildlife heading within this wilderness section for effects analysis related to pack goat use.

Equine stock use would be allowed access to Boulder Chain Lakes as far as Lodgepole Lake and Walker and Island Lakes via NFS trails, but access above these lakes or to the other lake basins encompassed in the closure would be by foot traffic only. Approximately 2.69 miles of Boulder Chain Trail 683 is within the equine stock use closure area, the rest of the area does not include trails. Traveling to and camping at the high elevation lakes is highly desirable and is frequently the primary destination. Some users may be completely excluded from these areas as a result. Under Alternative B, additional acres closed to use by equine stock users would increase the negative impacts to the unconfined opportunities in the Cecil D. Andrus-White Clouds Wilderness. However, given the low equine use estimated in these areas, and the challenge of access in this portion of the wilderness encompassed by the restriction, the overall impact on these user groups is anticipated to be low to moderate.

Stock use is integral to the services provided by several outfitter and guides (excluding the skiing and climbing guide services). However, most (>80%) of the destinations reported by outfitters and guides from 2006 to 2015 are located outside of the proposed restriction area (i.e., Chamberlain, Little Boulder assigned site, Walker Lake, Hatchet Lake, and South Fork assigned camp in the Hemingway-Boulders Wilderness). These destinations do not include day trip destinations or other stock-supported access into stock closure areas. Thus, this restriction would pose a moderate impact on the area available for these stock-supported commercial services to operate, especially for guided hunting trips. While some of the area within the proposed closure is desirable for hunting and other uses, much of the landscape within the closure area is extremely challenging or topographically prohibitive for stock use.

Campfires

Under Alternative B, campfires would only be allowed in Zones 3 and 4, which would be approximately 1% of the two wildernesses (1,110 acres) and which receives over 90% of the visitor use. Opportunities for having a campfire would still be available to visitors camping in those areas. Yet, the overall opportunity for campfires would be dramatically reduced under this alternative. While only 8% of visitor use is in Zones 1 and 2, those visitors wishing to camp with fire in the more remote areas of the wildernesses would be prohibited from doing so, resulting in a moderate, negative impact on primitive and unconfined recreation within the wildernesses

Permits

Two choices are presented in Alternative B for establishing a mandatory permit system. Both options would require users to obtain a free, self-issued wilderness use permit to educate users of regulations and determine use levels and patterns. The two options differ in that option 1 requires all visitors to have a wilderness use permit, and option 2 adds a requirement for groups of 8 or more people, or those with recreational stock that remain overnight to obtain their permit from a Forest Service or BLM office. Neither option would impose a quota system, limiting numbers of users.

Adding either permit requirement could degrade a visitor's sense of freedom; however, since the permit would be obtained prior to entry into the wilderness, the effect would be low for most users. While few studies exist on the topic, Hendee and Lucas (1973) found that most wilderness users favor, or at least do not object to, the concept of mandatory permits, registration, or related controls.

In the nearby Sawtooth Wilderness, also located in the Sawtooth NRA, a required permit system has been in place since 1998 and is a valuable education and monitoring tool. Groups of 8 or more people, or those with recreational stock that remain overnight are required to obtain their

permit from a Forest Service office. These user groups have the potential for the greatest resource impacts. This system provides an opportunity to be proactive in educating visitors and communicating rules and regulations. These contacts have proven to be positive in that visitors arrive prepared with an understanding of how to minimize their impacts. A positive benefit for the user is that the interaction allows the Forest Service to share information to enhance their experience. Because permits would be available in person, through the mail or fax, or electronically, the burden to the user would be low but would affect spontaneity, an important component of unconfined recreation.

Human Waste and Off-Trail Marking

The effects of Alternative B on the opportunities for primitive and unconfined recreation wilderness quality for human waste and off-trail marking would be the same as described for Alternative A.

Resource Indicator and Measure 5: Opportunities for Solitude

In summary, the direction presented in Alternative B would benefit opportunities for solitude based on improvements to naturalness and would result in limited improvements from visitor management actions.

Wilderness, Commercial Services, Scenic Environment, Rangeland, Fire Management, Lands and Special Uses, Search and Rescue and Management Zones

The effects of Alternative B on opportunities for solitude for wilderness, commercial services, scenery resource, rangeland resources, fire management, lands and special uses, SAR, and management zones would be the same as described for Alternative A.

Wildlife Resources

Prohibiting pack goat users under this alternative may have a negligible positive effect on opportunities for solitude by reducing the encounter rate, as this user group would not be within wilderness. Only one group registered in 2016, and wilderness rangers did not encounter any pack goat users during patrols within areas now designated wilderness from 2011 through 2016. Consequently, improvements to opportunities for solitude would be exceedingly low.

Recreation Resources

Group Size and Packstock Management

Wilderness visitors generally say that encountering large groups reduces the feelings of solitude—not seeing other people, privacy, and opportunity for contemplation. If too many other people are around, those visitors who desire solitude may have difficulty achieving it (Freimund and Cole 2001). However, visitor opinions differ on the importance of solitude. For some, the opportunity to visit is more important than having solitude on every trip. The most responsive management strategy, given the mandate in the Wilderness Act (Section 2c) to preserve outstanding opportunities for solitude and differing opinions on the importance of solitude, may be to emphasize preservation of solitude in the portions of wilderness that currently receive little use, and in the more heavily used locations, work to minimize excessive resource damage (Freimund and Cole 2001).

Wilderness offers opportunities for both on-trail and off-trail travel. Off-trail areas offer visitors the challenge of navigation and typically provide more opportunities for solitude in wilderness, as visitors tend to concentrate around trails and established campsites at popular destinations.

Under this alternative, the on-trail (i.e., in Zones 2, 3, and 4) group size would remain the same as under Alternative A: 12 people and 14 head of stock. Group sizes for both people and stock would be reduced in Zone 1, which contains most of the off-trail areas. These additional limits would affect the larger groups (those greater than 8 people or 10 head of stock), which account for about 4% of groups (based on 2016 register data; no groups registered with more than 10 head of stock), when traveling off-trail (Table 8).¹³

Visitors expect higher encounter rates near trailheads and trails, particularly near the edge of wilderness where day use occurs. Therefore, encounters in the more remote, interior areas or at campsites are more troubling to visitors and impact feelings of solitude more (Stankey 1973). Large groups can have an even greater impact.

Zone 1 group size restrictions would greatly reduce the area in which larger groups are able to travel together, resulting in negative effects to opportunities for primitive and unconfined recreation to these larger groups (as described above). Smaller group sizes, however, would experience an improvement in opportunities for solitude, particularly those visitors who wish to have fewer encounters with other people. While few of the reported destinations in the 2016 register data are within the proposed Zone 1, a potential exists that any group may enter this zone at some point on their trip.

Table 8. Proposed zoning—percentage of each zone and visitor use by zone for the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses

Proposed Zone	Percentage of Both Wildernesses	Percentage of Visitors by Zone in the Hemingway-Boulders Wilderness	Percentage of Visitors by Zone in the Cecil D. Andrus-White Clouds Wilderness
1	98%	1%	4%
2	2%	10%	4%
3	<1%	12%	12%
4	<1%	77%	80%

For 2016, most of the visitation to the wildernesses was day use (62%), with the heaviest use in the Hemingway-Boulders Wilderness at the North Fork of the Big Wood River and Murdock Creek trails. Register data show that use on the Murdock Creek trail included several groups of more than 12 people (5 groups), whereas no groups of over 12 people registered at the North Fork trailhead. (Notably, 4 of the 5 groups that exceeded 12 persons at the Murdock Creek trailhead, also all exceeded the current group size limit of 20 people.)

Overnight use in the two wildernesses in 2016 included about 38% of all visits, with the Chamberlain Lakes, Boulder Chain Lakes, and Boorn Lakes receiving the highest overnight use (23%, 20%, and 22% respectively). About 1% of overnight use (10 groups; based on 2016 data) would be affected by the 12-person group size limit. Past visitor studies identified campsite interaction as having the most impact to a visitor's perception of solitude (Cole and Hall 2009; Broom and Hall n.d.).

Groups using the services of outfitter and guides would be more affected by the group size limits, as described above. On average, outfitter and guides (excluding skiing and climbing focused

¹³ Refer to wildlife heading within this Wilderness section for effects analysis related to pack goat use.

guides) historically provided 25 trips per year. Of these, an average of 3 groups per year exceeded the proposed group size limit of 10 people (when looking at clients and employees combined), and an average of 2 groups per year exceeded the 12-person limit. For stock numbers, an average of 5 groups per year exceeded 10 head, and 2 groups per year exceeded 14 head. Excluding 2 to 5 outfitted groups per year would not dramatically decrease encounter rates, which is a measurable way to operationalize opportunities for solitude. Alternatively, these groups may simply split into smaller groups and travel and camp separately, which would have an overall negligible impact to opportunities for solitude.

Given that overall use would not be reduced and the recent number of groups over the proposed limits is quite low, there is little anticipated benefit to encounter rates from the group size restrictions proposed under this alternative. The same number of people may visit, and they may split into smaller groups.

For people who are disturbed by seeing large groups, the group size limits may increase their feelings of solitude in the wilderness, particularly in Zone 1 where impacts of seeing other groups, especially large groups, would be higher (Stankey 1973). Large groups primarily visit the Cecil D. Andrus-White Clouds Wilderness, and they tend to congregate in certain, popular locations within that wilderness. Most recreational use is concentrated over a 6-week period in the summer (between July 4 and the third week of August). Given this short window of use, concentrated at a few popular locations, the improvements to opportunities for solitude from reducing large groups would be substantial in these areas.

Encounters with different types of visitors (e.g., large groups) with different styles of use (e.g., horse users) may affect a visitor's experience more than sheer numbers of other parties (Marion et al. 1993). Such unwanted encounters often are one-sided impacts to one type of visitor, especially when hikers encounter recreational stock and impacts resulting from their use (e.g., waste on trails and campsites, insects, damage to vegetation). Restricting equine stock in certain areas and reducing the number of animals in a group would reduce these conflicts.

Actions to reduce effects to the natural quality would improve opportunities for solitude. Horse use and campfires often produce the most conspicuous impacts in a wilderness. Trampling and overgrazing may diminish a visitor's perception of naturalness. Confinement of stock impacts by eliminating their use in the equine closure areas may improve the sense of solitude in these areas.

Overall, opportunities for solitude would be preserved, or minimally improved, under Alternative B.

Campfires and Human Waste

Impacts from other users—the sights, sounds, and evidence of other humans being in the area—affect opportunities for solitude. As impacts from campfires and human waste are reduced, as described above under resource indicator 2 (natural quality), fewer signs of other visitors would be encountered under this alternative, improving opportunities for solitude.

Alternative C—Minimum Management

Resource Indicator and Measure 1: Untrammelled

In summary, Alternative C would result in potential degradation of the untrammelled quality due to lack of direction for various actions.

Recreation Resources

Under Alternative C, no changes to recreation management with no immediate effects to the untrammeled quality are proposed.

Existing recreation sites would remain, and additional campsites and user trails may proliferate. On a wilderness scale, effects from new campsites and user trails would be minor; however, in concentrated areas of use, natural processes could be degraded. Should these impacts occur on a large enough scale to have a substantial effect on natural processes, some manipulation of the environment, such as large-scale campsite restoration, may be considered to halt these occurrences, thereby degrading the untrammeled quality.

Lacking direction limiting new trail construction may result in trails being built for other purposes (e.g., convenience of the visitor). New trails, depending on the scale and scope of the construction, may impact the untrammeled quality. For example, a considerable length of trail requiring substantial cutting of trees or movement of earth would be considered a trammeling action. Any new trail construction would be analyzed under site-specific NEPA and MRA.

Scenic Environment

Under Alternative C, no direction would ensure that natural events affecting scenic qualities are not considered detrimental to scenic qualities. This lack of direction may result in efforts to address natural events, such as a landslide or forest fire, thereby taking action to manipulate or modify the event or to rehabilitate an affected area following a natural event. Additional trammeling actions could occur under this alternative.

Rangeland Resources

Under Alternative C, the direction limiting irrigation would not be established. Therefore, irrigation could be considered within the BLM-managed portion of the wilderness (it is an existing prohibition per Forest Service policy [FSM 2323.26b]). The potential effects that may occur would be analyzed in detail at the time a proposal to irrigate was submitted by a grazing permittee; however, if the activity were approved through a future MRA and NEPA analysis, impacts to the untrammeled quality by manipulating water flow and vegetation could occur.

No effects on the untrammeled quality would occur within NFS portions of the two wildernesses under Alternative C.

Fire Management

Not applying the direction proposed under Alternatives A or B could lead to decisions that do not fully address wilderness character and potentially result in trammeling actions.

Management Zones

Zones would not be established under this alternative. Instead, the ROS would continue to be use; however, the classification would be revised to primitive. ROS is not established for the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness. The direction under the ROS strategy in this alternative compared to the zoning strategy under Alternatives A and B does not directly correlate; making the comparison difficult. However, no effects to the untrammeled quality would occur from establishing the primitive ROS classification, because the Wilderness Act (and related regulations and policy) would continue to be followed, thus, protecting wilderness character.

Resource Indicator and Measure 2: Natural

In summary, Alternative C would lead to continued and increasing impacts to naturalness with recreational use.

Wilderness

Alternative C is silent on direction regarding reseeding/replanting and using natural openings for helicopter landings. Lacking this direction could increase impacts on the naturalness of the wildernesses by introducing nonnative vegetation or clearing vegetation from heavily wooded or vegetated areas for landing areas.

Wildlife Resources

Alternative C would provide no direction or standards for managing pack goats to reduce disease transmission between pack goats and bighorn sheep. Risk of contact and disease transmission from pack goats to bighorn sheep would remain unchanged from the existing condition. Die-offs of bighorn sheep would affect the natural quality. See the wildlife section below for more information.

The likelihood of increased wildlife disturbance, habituation, and food-conditioning would be greater without an emphasis on proper camping techniques, food storage, and containment (see the wildlife section below for additional information).

Recreation Resources

Wilderness rangers have reported recreational impacts since the mid-1990s, with increases in effects in off-trail areas, specifically Boulder Chain Lakes, Big Boulder Lakes, and Four Lakes Basin. These effects include new user-created trails, more campfire rings, increased vegetation damage, and poor sanitation (trash and human waste). Boorn Lakes, Chamberlain Lakes, Baker Lake, Lower Boulder Chain Lakes, and Walker Lake are specific areas identified as receiving high use with unacceptable effects, including proliferating fire rings, damage to trees from hacking and carving, nails in trees, game poles, garbage, and exposed human excrement. Damage to both living and dead whitebark pine, primarily associated with campfires and tying of stock, was also noted by wilderness rangers. Other recreational stock use effects included damage to lakeshores and meadows, live trees girdled, and exposed roots.

Many rangers spent multiple seasons patrolling the backcountry of the Boulder-White Clouds and the Sawtooth Wilderness, providing a long-term perspective from which to base their observations. Based on their observations over time, rangers consistently recommended restricting grazing near lakes, prohibiting campfires at high elevations, and reducing group size. Over the entirety of the wildernesses, direct negative effects on biological resources could occur from campsite and campfire proliferation, increased vegetation impacts, unregulated management of human waste, and surface disturbances.

Group Size and Packstock Management

Under Alternative C, no additional restrictions or requirements would be placed on the type or extent of recreational activities. Physical impacts from visitor use would likely increase, including hard-pan soil and total loss of vegetation, tree damage, campfire impacts, trash proliferation, and exposed human waste, degrading the natural quality of wilderness character. However, “some of the most serious impacts of recreation are not readily obvious to the casual observer. Vegetation removal, loss of organic horizons, and soil compaction alter decomposition rates and nutrient cycling, changes that can severely reduce the resilience of these sites” (Cole

2000). At a wilderness scale, the impacts to water, wildlife, vegetation, and soils from visitor use would be expected to be minor, but in sensitive areas, such as upper lake basins and other off-trail destinations, the natural quality would be degraded over time without additional standards and guidelines for recreation management. In those areas, natural processes could be degraded.

Monz and others (2000; p. 266) reviewed various studies on group size and resource impact, and suggested, “In relatively undisturbed places, intense, concentrated use by a large group can cause substantial impact, while a small group exhibiting the same behavior over a similar square area might cause little significant impact to the soil and plant communities.” Large groups can mitigate the effects of their size on soils and vegetation by breaking into small groups when traveling and camping (Monz et al. 2000). Without the additional protections from large group and stock use impacts that Alternatives A and B provide, areas currently receiving low-to-moderate use, such as the upper Boulder Chain Lakes and Big Boulder Lakes above Walker and Island Lakes, would likely experience increased degradation to vegetation and soils under this alternative.

When group sizes are set at high limits, they are ineffective at reducing resource impacts and protecting natural conditions (Cole et al. 1987). Disturbances caused by both human and recreational stock presence would continue to exist and likely expand, with a negative effect on the natural quality. Numerous studies have found that horses are more likely than hikers to cause accelerated erosion (DeLuca et al. 1998) and vegetation damage (Cole and Spildie 1998). Stock confinement near water and in camps and tying stock directly to trees cause impacts that affect the natural conditions and the experience of other wilderness visitors. Recreational stock grazing is not addressed under Alternative C, allowing for continued degradation of the natural quality.

Under this alternative, the current group size limits (20 people and 25 head of stock on NFS lands and no limits on BLM-managed lands within the Cecil D. Andrus-White Clouds Wilderness) would continue to be in effect. As the maximum allowable size of groups increases, the effectiveness of the restriction—in terms of reducing environmental effects—is reduced. Monz and others (2000) contend that limits of 15 to 25 people or stock limits are unlikely to alleviate impacts on the environment, particularly in less-used, more pristine areas. “If these groups do not employ strict minimum-impact techniques, they will need to find - or will create - very large impacted areas while camping and will cause observable impact in trail-less areas while hiking. This is particularly true when groups travel with horses and mules” (Monz et al. 2000, p. 266).

Current group sizes do little to protect the natural quality of the wilderness. High-use destination areas—Boorn Lakes, Chamberlain Lakes, lower Boulder Chain Lakes, Island and Walker Lakes—show impacts from concentrated and heavy use, including large areas of barren compacted soil, scarred or dead trees, broken stream banks or lakeshores, large fire rings, and other “improvements” such as meat poles and furniture built from logs. Enlargement of established recreation sites from large groups is “the most common, detrimental change” to established recreation sites (Cole 1989a). Expanding these established sites may occur under Alternative C, as large groups would continue to be allowed.

Recreation sites in more remote, less-disturbed areas, such as Four Lakes Basin, Slickenslide Creek drainage, upper Boulder Chain Lakes, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes above Island and Walker Lakes, would be at greatest risk for site enlargement. New impacts would also be expected to vegetation, soils, and wildlife resources caused by visitors expanding into new camping locations. McEwan and others (1996) found that

even when use is relatively low, sites used by stock can be more heavily impacted as compared to hiker use.

Also, areas where recreational stock are tethered or graze for the night see impacts over a much larger area than all other recreational impacts combined (Dawson and Hendee 2009). This alternative contains no specific direction to protect riparian habitats from stock use. No restrictions on tethering or grazing of recreational stock near water are included, which could lead to riparian, soil, and vegetation impacts. Nor is there direction to encourage the use of temporary containment systems and tree-saver devices, which could prevent tree damage.

Continuing current group size limits, which includes no limits on the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness, may result in additional impacts to the natural quality as recreation sites are expanded and stock use near water sources impacts vegetation, soils, and water quality.

Campfires

As discussed above, campfires result in a variety of aesthetic and ecological impacts which account as the “imprint of man” on the landscape, as specifically mandated against in the Wilderness Act (Section 2c).

Under Alternative C, campfire restrictions would continue at some high elevation lakes; however, other sensitive alpine areas would not have the same protection. In addition to the obvious effects of campfires, felling trees or cutting limbs make trees more susceptible to insect and fungal attacks that can increase tree mortality (Reid and Marion 2005). Burning firewood changes the chemical properties of the soil (Marion et al. 2016) and can affect nutrient cycling for 50 to 70 years in localized areas (Reid and Marion 2005).

Whitebark pine is the primary tree species above 8,000 feet. The unique properties (rot resistance) and habitat (dry, cool environment; probability of natural fire is low) of whitebark pine allow remnant wood to survive for millennia (Stephenson and van Mantgem, 2005). Given that whitebark pine wood persists on the landscape for so long, even small impacts, such as burning in campfires or removal, can substantially impact these important biological resources over time.

The existing campfire restriction would continue to protect specific areas and resources. However, other areas, particularly areas with whitebark pine, would continue to be negatively affected.

Human Waste

No human waste regulations are currently in place, and human waste and sanitation are ongoing issues within the wildernesses. Under this alternative, there would be continuing impacts of visitors encountering feces or toilet paper, animal and insect transmission of pathogens, and water contamination after rainfall (Monz et al. 2000).

Off-Trail Marking

Off-trail route marking would not be prohibited under this alternative, allowing social trail impacts to proliferate with additional loss of vegetation and soil compaction. Over the long term, the impacts to naturalness would be expected to increase, especially in less-resilient off-trail areas (e.g., alpine habitats).

Commercial Services

Alternative C does not include authorizing assigned campsites within Zones 3 and 4 and incorporating wilderness practices and values into interactions with clients. Lacking this direction could lead to additional impacts to the naturalness, as assigned camps could be approved in the more primitive areas of the wilderness. Ensuring outfitter and guides provide education and modeling of wilderness practices would minimize visitor impacts on the natural resources. Overall, a lack of direction may lead to minor, negative effects on naturalness.

Scenic Environment

Alternative C does not include direction ensuring that natural events, which may affect scenic qualities, are not considered detrimental to scenic qualities. This lack of direction may result in efforts to address natural events, such as a landslide or forest fire, thereby affecting the natural resources in the wilderness and negatively affecting naturalness.

Rangeland Resources

Under Alternative C, the direction regarding irrigation would not be established. Therefore, irrigation could be considered within the BLM-managed portion of the wilderness (it is an existing prohibition per Forest Service policy [FSM 2323.26b]). If the activity were approved, impacts to the natural quality would occur, specifically to the natural hydrologic patterns of the area and to vegetation. This type of project and its potential impacts would be analyzed in detail under site-specific NEPA and MRA, at a time a proposal to irrigate was submitted by a grazing permittee.

Alternative C would not affect the NFS portions of the wilderness areas because irrigation was prohibited prior to designation and continues to be prohibited by Forest Service policy.

Fire Management

Similar to the analysis described under resource indicator and measure 1 (untrammeled), fire may be actively managed under Alternative C. However, suppressing naturally occurring fire without consideration to wilderness character would impact the natural quality (e.g., alter natural fire regimes, vegetation, and habitat). Alternatives A and B require consideration of wilderness character and assignment of a resource advisor with wilderness experience, which would reduce the likelihood of unnecessary actions to manage naturally occurring fire within wilderness. Lacking this direction may result in negative effects to the natural quality under Alternative C.

Lands and Special Uses

The zone direction proposed under Alternatives A and B would not occur under Alternative C. No direct effects to naturalness would occur under this alternative. Indirectly, there may be increased chances for lands or special use proposals to be placed in the more primitive areas of the wilderness, which could impact naturalness.

Search and Rescue

Alternative C is silent on SAR topics, including approval of motorized emergency response and direction for equipment or vehicles used in SAR operations. The direction contained in the flow chart is taken from law (the Wilderness Act, Section 4(c)) and agency policy (BLM Manual 6340 1.6.C.17 and FSM 2326), which would continue to apply under this alternative.

The flow chart proposed under Alternatives A and B condenses direction from law and policy to allow for a more rapid response in times of emergency to ensure the undeveloped quality, and therefore the natural quality, is preserved to the maximum extent possible. Lacking the flow chart is unlikely to measurably affect the natural quality, as the direction provided therein is policy.

Alternative C does not address equipment or vehicles used for SAR operations. Without the direction proposed under the Alternatives A and B, there may be an increased risk of spread of invasive species or clearing of landing areas and/or any damage resulting from SAR operations may be left unaddressed. This alternative would pose minor, likely localized, negative effects to the natural quality.

Management Zones

Management zones would not be established under this alternative. Instead, on the NFS lands, the management of the area would continue to be guided by ROS direction as established in the Forest Plan. However, the classification would be revised to primitive. ROS would not be implemented on the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness.

No direct or indirect effects to the natural quality would occur from continuing ROS on NFS lands. The Wilderness Act (and related regulations and policy) would have to be followed, thus, protecting wilderness character. However, the proactive guidance to protect the conditions existing at the time of designation and the desired conditions would be lacking. This lack of direction may result in various impacts to naturalness as the conditions in the wildernesses drift toward minimum standards that are based on the portion of the wilderness with lowest quality or a homogenizing effect on the quality and diversity of wilderness resources (Haas et al. 1987).

Resource Indicator and Measure 3: Undeveloped

In summary, Alternative C would not lead to immediate, direct impacts to the undeveloped quality; however, ongoing degradation to the quality may occur.

Wilderness

Alternative C would not address permanent roads (when valid right or permitted use ends) or unauthorized vehicle use within wilderness. No direct impacts would occur as no new structures or equipment or vehicle uses are proposed. Continued impacts to the undeveloped quality from routes would remain. Unaddressed effects from unauthorized vehicle use may lead to additional unauthorized vehicle use, with localized negative effects to the undeveloped quality.

Rangeland Resources

Under Alternative C, irrigation would not be prohibited within the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness. No effect would occur within the NFS lands of the two wildernesses because this prohibition is existing policy (FSM 2323.26b). For the BLM-portion of the Cecil D. Andrus-White Clouds Wilderness, if a grazing permittee were to submit a proposal to irrigate, a subsequent MRA and NEPA analysis would provide detailed analysis. In general, however, effects to the undeveloped quality could occur if an irrigation project was implemented.

Fire Management

Wildfire support facilities (e.g., spike camps, landing areas) are to be located outside of the wilderness boundary whenever feasible per Forest Service policy (FSM 2324.23). However, under Alternative C, this direction would be lacking on the BLM-managed portion of the Cecil

D. Andrus-White Clouds Wilderness. Given its size (459 acres), the need to locate wildfire support facilities in the BLM-managed portion of the wilderness is low, especially with its proximity to roads outside of the wilderness. Consequently, this alternative would be unlikely to impact the undeveloped quality of either wilderness.

Search and Rescue

Alternative C is silent on SAR topics, including approval of motorized emergency response and direction for equipment or vehicles used in SAR operations. This alternative may result in additional negative effects to the undeveloped quality because approval may not be as consistent without the availability of the quick reference guide to wilderness policy as compiled in the flowchart.

Management Zones

Zones would not be established under this alternative. Instead, management of the area would default to the ROS direction as established in the Forest Plan. No direction for the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness would exist. No direct or indirect effects to the undeveloped quality would occur from continuing ROS direction because limitations on wilderness development found in the Wilderness Act and related regulations and policy would be followed, thus, protecting wilderness character.

For example, some portions of the wilderness would be described as Semi-Primitive Motorized or Roaded Modified under the current ROS system; however, motorized vehicles and equipment are prohibited per the Wilderness Act. This prohibition would remain in place regardless of alternative selected.

The direction regarding developments, as proposed in the zone direction under Alternatives A and B, would be lacking under this alternative, which could lead to additional signs or system trails being placed in the more pristine portions of the wilderness.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

In summary, Alternative C not result in immediate impacts on the FS-managed portions of the wildernesses. New visitor use restrictions (e.g., group size) would be implemented on the BLM-managed portion of the White Clouds Wilderness, but impacts are considered to be low.

Recreation Resources

Group Size and Packstock Management

Alternative C is the least restrictive alternative and would provide the most freedom of choice to visitors. The opportunity for a primitive and unconfined type of recreation would continue to exist in its current form, including existing special regulations on the NFS portions of wilderness, such as group size for people and stock, campfires, and recreation stock management.

Alternative C does not include actions that would further reduce group and stock size limits, restrict campfires, reduce areas available to equine stock, or limit the use of pack goats. Providing for current levels of primitive and unconfined recreation without additional constraints to visitors may sacrifice the quality of the experience by compromising solitude and natural conditions. As a result, visitors may be displaced as overcrowding, conflict, and deteriorating biophysical conditions push visitors to seek their wilderness experience elsewhere (Hall and Cole 2007). Visitors seeking naturalness and solitude may seek new areas to recreate, either in a different part of the wilderness or outside of these areas.

Group sizes (people and stock) and pack stock management requirements would be maintained at current agency regulations under this alternative, which would benefit users desiring to experience the wilderness with a large group of people or stock support but may negatively affect wilderness visitors seeking solitude. Visitors who prefer to travel with stock would continue to be allowed to travel and graze unrestricted within the wilderness areas.

Campfires

Under Alternative C, current campfire restrictions would continue; restrictions would be enforced around several lakes within the NFS portion of the Cecil D. Andrus-White Clouds Wilderness. Those visitors who wish to experience a campfire would have more area available (99% of the Cecil D. Andrus-White Clouds Wilderness and 100% of the Hemingway-Boulders Wilderness) under Alternative C.

Off-Trail Route Marking

Unauthorized routes would continue to be marked with stacked rocks, flagging, or other markings, providing a feeling of security to some users; however, diminishing challenge and the sense of discovery for others.

Permits

Visitors would not be required to have a use permit; however, the voluntary free-use registration system would continue. This system has been in place for decades so no change to visitor experience would occur under this alternative.

Commercial Services

The presence of structures or installations in campsites reduces self-reliant recreation, which is the hallmark of primitive recreation. The standards presented under Alternatives A and B regarding authorization of only temporary structures necessary to meet the public need in a manner compatible with the wilderness environment would continue to apply to the NFS portion of the wilderness because those requirements are established policy (FSM 2323.13g).

Under Alternative C, this direction would not be explicitly applied to the BLM-managed portion of the wilderness; although BLM policy (BLM H-2930-1, BLM 6340 B.2.(i).) alludes to it. Lacking direction to minimize the presence and duration of commercial outfitter installations and structures would degrade the opportunities for primitive and unconfined recreation as additional facilities that reduce self-reliant recreation may be established. This impact would be negligible given the small size of the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness.

Management Zones

Zones would not be established under this alternative. Instead, management of the area would default to the ROS direction as established in the Forest Plan. No direction would exist for the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness. No direct or indirect effects to the opportunities for primitive and unconfined recreation would occur from continuing ROS direction. The ROS direction would not result in regulations impacting unconfined recreation. The setting for Primitive and Semi-Primitive Non-Motorized ROS classes, which encompass the majority of the wildernesses, offer opportunities for solitude, remoteness, and risk, with a minimum of onsite controls and restrictions. These restrictions work in concert with Wilderness Act requirements to preserve wilderness character.

Resource Indicator and Measure 5: Opportunities for Solitude

In summary, Alternative C would result in continuing impacts to opportunities for solitude from large groups and recreational use. Less management direction overall may lead to additional impacts, or developments, which increase sights and sounds of other people.

Wilderness

Opportunities for solitude are impacted by sights and sounds of human activity, whether short term (e.g., other visitors on a trail) or long term (developments or resource impacts). Under Alternative C, no direction specific to using natural openings for helicopter landing areas would exist. As visitors encounter cleared landing areas, minor, localized negative effects on solitude would occur. These occurrences may increase under this alternative.

Recreation Resources

The Wilderness Act requires managing wilderness to provide "outstanding opportunities for solitude or a primitive and unconfined type of recreation." Under Alternative C, crowding and conflict would not be mitigated, which would decrease opportunities for solitude over time, especially during periods of high use.

Group Size and Packstock Management and Campfires

Current direction for managing group size, recreational stock use, and campfires have beneficial impacts to primitive and unconfined recreation opportunities, but would not provide for the same level of solitude as under Alternative A. Under Alternative C, group size would continue to be limited to 20 people and 25 head of stock, with the exception of the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness where no restrictions related to group size exist. While large groups constitute a small percentage of use in the wildernesses, when encountered, visitors may experience a loss of solitude. Early research found that wilderness visitors felt that encountering large groups impacted the feeling of wilderness (Monz et al. 2000). More recent research has found inconclusive results regarding the impact of large groups on the wilderness experience (Monz et al. 2000).

Additionally, recreational stock use management is complicated, as it is an accepted, traditional use of wilderness. Dawson and Hendee (2009, p.453) state the following:

Many hikers consider stock impacts inappropriate on the wilderness resource, and this, along with other inconveniences such as exposure to horse manure and moving off the trail to let horse users pass, creates conflicts between backpackers and horse users. These conflicts appear to be growing. Complaints about stock are the most common complaint in many wilderness areas. Horse/hiker conflict tends to be one-sided, with the hikers complaining more. Large parties are objectionable to persons in the typical smaller groups.

Conflicts between hikers and recreational stock use would not be addressed under Alternative C, and conflicts would likely worsen with additional visitor use.

Many of the effects associated with degradation of the natural quality can also detract from visitor experience and opportunities for solitude, as they are obvious signs of human presence and activity (e.g., fire rings, campsites with areas of barren soil, social trails, damage to trees from firewood collection and recreational stock, garbage and exposed human waste). With a rise in use, visitors would increasingly encounter these localized impacts, which could affect the rugged and remote feel of the wilderness areas in site-specific locations. However, opportunities in the majority of the wilderness landscape would largely remain unchanged.

A lack of restrictions on proper food storage and containment under Alternative C could lead to more human–wildlife encounters and an additional need for contact from rangers. These contacts are generally received positively, but for those seeking complete isolation, they could have a negative effect on their solitude.

Commercial Services

Without the direction for confining assigned outfitter camps to the less pristine portions of the wildernesses, Alternative C may lead to increased impacts on solitude because of increased sights and sounds of others.

Rangeland Resources

Under this alternative, no prohibition regarding irrigation would be established. There would be no effects within the FS-portions of the two wildernesses, because this prohibition is existing policy (FSM 2323.26b), which would apply regardless of the wilderness plan selected. On the BLM-portion of the Cecil D. Andrus-White Clouds Wilderness, if a future irrigation project were to occur, there could be additional sights (developments) of human occupation within the wilderness, potentially impacting opportunities for solitude.

Fire Management

Wildfire support facilities (e.g., spike camps, landing areas) are to be located outside of the wilderness boundary whenever feasible per Forest Service policy (FSM 2324.23). However, under Alternative C, this direction would be lacking on the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness. Given its size (459 acres), the need to locate wildfire support facilities in this portion of the wilderness is low, especially with its proximity to roads outside of the wilderness. Consequently, this alternative would be unlikely to impact opportunities for solitude on either wilderness.

Lands and Special Uses

This alternative does not include direction for where lands and special uses projects may be placed. Lacking this direction may lead to additional sights and sounds of human activity within the more pristine areas, which could impact feelings of remoteness. Activities or projects occurring in the more heavily used portions of the wilderness would have a higher likelihood of being encountered by visitors, which could also impact opportunities for solitude.

Search and Rescue

When encountered, resource impacts from SAR operations affect feelings of remoteness for visitors. Alternative C does not include the motorized approval flow chart. However, the direction contained in the flow chart is taken from law and policy and would apply regardless of the WMP. No direct effects to solitude would occur under Alternative C. Indirect effects may lead to minor, temporary effects on opportunities for solitude since the response time under Alternative C may be slower without the condensed flowchart.

Management Zones

Zones would not be established under this alternative. Instead, management would default to ROS direction as established in the Forest Plan. No direction would apply to the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness. No effects to the opportunities for solitude would occur from continuing ROS. Some portions of the wilderness are described as Roaded Natural ROS class; however, motorized vehicles and equipment are prohibited per the

Wilderness Act. The ROS classes were established using certain distances from roads, and these buffers extend into wilderness, which may mean that sights and sounds of motorized use may be visible from portions of the wilderness due to the proximity to roads and trails outside the wilderness. While these sights and sounds constitute impacts on opportunities for solitude, this impact would occur regardless of the alternative selected.

Cumulative Effects

Alternative A

Resource Indicator and Measure 1: Untrammeled

Trail and road construction; historic mining; management of wildland fire; stocking of indigenous and non-indigenous fish; capturing, collaring or tagging fish and wildlife species; livestock grazing and associated structures; and water diversions have affected the untrammeled quality within the wilderness cumulative effects area. No cumulative negative effects to the untrammeled quality would occur under Alternative A since this alternative would benefit this quality.

Resource Indicator and Measure 2: Natural

Invasive species establishment, fire suppression, recreational use, fish stocking, and livestock operations have degraded vegetation and wildlife composition to varying degrees within the wilderness cumulative effects area. Conversely, treatment to remove invasive species has improved the naturalness of the area. Retirement of livestock grazing allotments (in accordance with the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act, P.L. 114-46) may improve naturalness by reducing the risk of spread of invasive species and other impacts associated with livestock grazing. No cumulative negative effects to the natural quality would occur under Alternative A since this alternative would benefit this quality.

Resource Indicator and Measure 3: Undeveloped

Construction and maintenance of range developments, water diversions, and various user-created or constructed routes have impacted the undeveloped quality within the wilderness cumulative effects area. Use of motorized equipment and mechanized transportation for recreational activities, emergency use such as wildfire, or SAR operations and for administrative use such as transportation of materials for trail construction have affected the undeveloped quality. No cumulative negative impacts to the undeveloped quality would occur since this alternative would benefit this quality.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

Recreational use, outfitter and guide activities, regulations on group size, campfires, recreational stock use, off-trail marking, and trail construction have affected opportunities for primitive and unconfined recreation within the wilderness cumulative effects area. User trails would no longer be marked, improving opportunities for primitive recreation. Cumulative effects are expected to be low-to-moderate to opportunities for primitive and unconfined recreation due to the additional regulations on visitors use (i.e., group size, campfire, recreational stock, and pack goat restrictions).

Resource Indicator and Measure 5: Opportunities for Solitude

Recreational use; federal projects with personnel on the ground (e.g., trail maintenance, monitoring, invasive species treatments); and developments (e.g., recreation facilities, livestock

developments) have affected opportunities for solitude within the wilderness cumulative effects area. Alternative A would result in positive direct and indirect effects on opportunities for solitude and, therefore, would not contribute negative cumulative effects.

Alternative B—Natural-Focus

Resource Indicator and Measure 1: Untrammeled

The cumulative effects of Alternative B would be the same as described under Alternative A.

Resource Indicator and Measure 2: Natural

Invasive species establishment, fire suppression, recreational use, fish stocking, and livestock operations which may have degraded vegetation and wildlife composition to varying degrees within the wilderness have negatively affected the natural quality within the wilderness cumulative effects area. Conversely, treatment to remove invasive species has improved the naturalness of the area. Retiring livestock grazing allotments (in accordance with the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act, P.L. 114-46) may improve naturalness by reducing the risk of weed spread and other impacts associated with livestock grazing. No cumulative negative impacts to the natural quality would occur since this alternative would benefit this quality. Alternative B would be expected to alleviate some of the negative effects from recreational use over time.

Resource Indicator and Measure 3: Undeveloped

The cumulative effects of Alternative B would be the same as described under Alternative A.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

Regulations on group size, campfires, recreational stock use, off-trail marking, and trail construction have affected opportunities for primitive and unconfined recreation within the wilderness cumulative effects area.

The complexity of the group size restrictions under Alternative B would be onerous on the visitor; outfitters, guides, and their clients; and the agencies implementing the limits. In fact, within proximity to the wilderness and into the wilderness, users would be met with four different group size limits. Nearby BLM-managed and neighboring NFS lands have no group size limits, the portions of the Sawtooth NRA surrounding the wildernesses have limits of 20 people and 25 head of stock. Under Alternative B, group size limits would continue to decrease once visitors enter the wilderness to 12 people and 14 head of stock, and as they continued off-trail, group size limits would decrease further to 8 people and 10 head of stock.

Cumulative effects are expected to be moderate to opportunities for primitive and unconfined recreation due to the additional regulations on visitors use (principally group size, campfire, stock, and pack goat restrictions).

Resource Indicator and Measure 5: Opportunities for Solitude

Recreation; federal projects with personnel on the ground (e.g., trail maintenance, monitoring, invasive species treatments); outfitter and guide activities; developments (e.g., recreational facilities, livestock developments) have affected opportunities for solitude within the wilderness cumulative effects area. Alternative B would not result in adverse cumulative effects on opportunities for solitude.

Alternative C—Minimum Management

Resource Indicator and Measure 1: Untrammeled

Alternative C lacks the proactive direction presented under the other two alternatives and may lead to additional effects to the untrammeled quality related to trails, or range projects on the BLM-managed portion of the Cecil D. Andrus-White Clouds Wilderness when combined with past, present, and reasonably foreseeable actions. The scope and magnitude of effects would depend upon the specific actions taken.

Resource Indicator and Measure 2: Natural

Invasive species establishment, fire suppression, recreational use, fish stocking, and livestock operations have degraded vegetation and wildlife composition to varying degrees within the wilderness cumulative effects area. Conversely, treatment to remove invasive species has improved the naturalness of the area. Retirement of livestock grazing allotments (in accordance with the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act, P.L. 114-46) may improve naturalness by reducing the risk of spread of invasive species and other impacts associated with livestock grazing.

Alternative C would contribute to the cumulative negative impacts that already exist from recreational use of the wilderness.

Resource Indicator and Measure 3: Undeveloped

Construction and maintenance of range developments, water diversion(s), and various user-created or constructed routes have affected the undeveloped quality within the wilderness cumulative effects area. Reasonably foreseeable actions include retiring livestock grazing allotments (in accordance with the Sawtooth National Recreation Area and Jerry Peak Wilderness Additions Act, P.L. 114-46).

Alternative C would not contribute to cumulative effects to the undeveloped quality, as no new structures or use of motorized equipment or mechanized transport are proposed. Lacking specific exclusions for wilderness (clearing for helicopter landings), livestock grazing management (future irrigation proposals), SAR (motorized emergency response), and management zones (additional signs or system trails) may result in additional motorized use or developments.

Resource Indicator and Measure 4: Opportunities for Primitive and Unconfined Recreation

Recreational use, outfitter and guide activities, regulations on group size, campfires, recreational stock use, and trail construction have affected opportunities for primitive and unconfined recreation within the wilderness cumulative effects area. Alternative C would not result in cumulative effects, as no additional regulations nor facilities that degrade self-reliant recreation would be established.

Resource Indicator and Measure 5: Opportunities for Solitude

Recreation; federal projects with personnel on the ground (e.g., trail maintenance, monitoring, invasive species treatments); and permittees managing their livestock and developments (e.g., recreation facilities, livestock developments) have affected opportunities for solitude within the wilderness cumulative effects area. Alternative C may result in cumulative minor-to-moderate, negative effects as continued management would allow large groups, and recreational impacts (e.g. proliferating fire rings, unmanaged stock use) would continue or increase with increasing visitor use.

Summary

The wilderness resource is the primary driver of the Purpose and Need for the project. The purpose of the WMP is to provide management direction for preserving wilderness character. Each alternative meets this Purpose to a varying degree. The Need for the action is also intimately related to the wilderness resource: the need for the resource stems from the signing of P.L. 114-46, which designated these wilderness areas and changed the management direction of these areas (from recommended wilderness or WSA status to congressionally designated wildernesses).

Further, effect to wilderness character was identified as a key issue through scoping. The above analysis attempts to explicitly identify the trade-offs in wilderness stewardship, in relation to losses and gains under each alternative. Identifying the effects of the various management alternatives is presented to inform the decision-making process. Under each alternative, the qualities of wilderness character may be improved, preserved, or degraded. Protecting one quality may degrade another quality, or actions may affect one quality both positively and negatively. The following table summarizes how the alternatives address the Purpose and Need and key issues (Table 9).

Table 9. Summary comparison of how the alternatives address the Purpose and Need and key issues of wilderness character

Indicator/ Measure	Alternative A: Proposed Action	Alternative B: Natural- Focus	Alternative C: Minimum Management
Untrammeled	Direction would ensure preservation of the untrammeled quality.	Same as A.	Future actions allowable under this alternative may degrade this quality.
Natural	Direction would preserve the natural quality, and the recreational use restrictions would moderately improve the natural quality.	Preservation, and potential for substantial improvement to the natural quality.	Continued and increasing impacts to naturalness with recreational use.
Undeveloped	Direction would ensure preservation of the undeveloped quality.	Same as Alternative A.	No immediate impacts, however, ongoing degradation of the quality may occur.
Opportunities for Primitive and Unconfined Recreation	A mix of direction that would both improve and degrade opportunities for primitive and unconfined recreation. Overall, moderate degradation to this quality from the recreational use restrictions.	Substantial impacts to primitive and unconfined recreation opportunities, particularly for equine stock, pack goat users, and outfitted groups.	No immediate impacts on the FS-managed portion. New visitor use restrictions (e.g., group size) would be implemented on the BLM-managed portion but impacts are considered to be low.
Opportunities for Solitude	Moderate improvement to opportunities for solitude.	Benefits to opportunities for solitude based on improvements to naturalness; and limited improvements from visitor management actions.	Continuing impacts to solitude from large groups and recreational impacts. Less management direction overall may lead to additional impacts, or developments, which increase sights and sounds of other people.

3.4. Wildlife

3.4.1. Introduction

This section addresses the effects of the WMP on wildlife-related concerns. The proposed management of recreational activities (e.g., pack goat use, campfire use, large groups, recreational stock use in sensitive areas, dogs, human waste management, zones) in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness may affect wildlife. The following measurement indicators were used to analyze effects to wildlife:

- Risk of contact between bighorn sheep and pack goats
- Disturbance to wildlife and adequacy of management actions to protect wildlife

This analysis is based on the following assumptions:

- The WMP and actions identified in the alternatives would be fully implemented, adhered to by the public, and enforced by the Forest Service. Some amount of noncompliance would likely occur. Regardless, this analysis is based on full implementation of the alternatives.
- Increased visitation in the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wildernesses can be anticipated over the life of the WMP based on estimates that Forest Service wilderness visitation increased roughly 3.2% per year between 2005 and 2012 (Holmes et al. 2015); the Idaho Department of Labor projection that Idaho's population will grow 15.3% from 2015 to 2025, an annual growth rate of 1.4%; and that 64% of use in the Hemingway-Boulder Wilderness and Cecil D. Andrus-White Clouds Wilderness areas is people from Idaho.

The spatial boundaries for analyzing the direct and indirect effects to wildlife are the wilderness area boundaries because management of recreational activities described in the alternatives that affect wildlife would occur within these boundaries. The temporal boundaries for analyzing the direct and indirect effects are long-term (greater than 15 years as stated in the Forest Plan) because the recreational activities that influence the wildlife issues would be ongoing indefinitely.

The north end of the Forest and the BLM Challis Field Office area is considered the cumulative effects boundary for Canada lynx and wolverine based on the home range size and wide-ranging nature of these species (Aubry et al. 2000; Copeland 1996). The north end of the Forest and the BLM Challis Field Office area is also considered the cumulative effects boundary for gray wolf and fisher based on home range size of these species (USFWS 2003; Powell and Zielinski 1994). The Sawtooth NRA and Challis BLM Field Office area is considered the cumulative effects boundary for all other species of concern due to the scale of their population sizes. The temporal boundaries for analyzing the cumulative effects are long-term (greater than 15 years as defined in the Forest Plan) because the recreational activities that influence the wildlife issues would be ongoing indefinitely.

3.4.2. Affected Environment

Resource Indicator and Measure 1: Risk of Contact between Bighorn Sheep and Pack Goats

Prior to 1850, bighorn sheep were the most abundant game animal in Idaho. Declines began as human settlement and their associated activities increased in Idaho. Overhunting, mining, domestic livestock grazing, and diseases have all contributed to bighorn sheep declines. The subspecies Rocky Mountain bighorn sheep (*Ovis canadensis canadensis*) have continued to decline in the state with numbers dropping from approximately 3,800 in 1990 to 1,700 in 1998 (Toweill and Geist 1999).

Within the Sawtooth NRA, Rocky Mountain bighorn sheep historically occurred in the Sawtooth Mountains and throughout the White Cloud and Boulder Mountains (Toweill and Geist 1999). Currently, one population (East Fork Salmon Population) remains in the White Cloud Mountains. A portion of this population uses the White Cloud Mountains from spring through fall. They move to high elevation areas, generally above 8,000 feet, in the north end of the White Cloud Mountains in the spring, summer, and fall and spend winters along the East Fork of the Salmon River at lower elevations. The range of this population historically extended throughout the

White Cloud and Boulder Mountains (Lindquist 1977). The population experienced a large decline between 1990 and 2007 (IDFG 2010) though it has shown a slight increase since then (Miyaski et al. 2014). The population is thought to be disease-limited based on persistently low lamb-to-ewe ratios since the die-off, from an average of 57 lambs to 100 ewes between 1977 and 1990 to an average of less than 9 to 100 since 1991 (Miyaski et al. 2014). An ongoing study by the IDFG of this herd has documented bighorn sheep use of the north side of the Boulder Mountains (Jessie Shallow, IDFG, pers. comm., 2017) within the Hemingway-Boulder Wilderness.

Wild sheep are very susceptible to respiratory infections that result in pneumonia. Bacteria of the family Pasteurellaceae (*Pasteurella multocida*, *Mannheimia haemolytica*, and *Bibersteinia trehalosi*), and *Mycoplasma ovipneumoniae* are the most frequently identified pathogens from wild sheep with pneumonia. Pneumonia caused by these organisms often results in the mortality of a large proportion of the population (TWS 2014) across all age classes and is typically followed by multiple years of lamb mortality from pneumonia (WAFWA WHC 2014). This pattern of pneumonia in wild sheep has been documented in more than 70 peer-reviewed scientific publications.

Incidences of pneumonia-related die-offs are frequently associated with the presence of pathogens commonly carried by domestic sheep and goats (George et al. 2008, Wehausen et al. 2011, Heinse et al. 2016). Controlled research studies have confirmed that both *Mannheimia hemolytica* and *Mycoplasma ovipneumoniae* are transmitted to wild sheep upon contact with, or proximity to, domestic sheep (Besser et al. 2014, Lawrence et al. 2010, Wehausen et al. 2011) and *Mycoplasma ovipneumoniae* are transmitted to wild sheep from domestic goats (Rudolph et al. 2003, Besser et al. 2017). Domestic sheep and goats carry these disease-causing organisms which typically cause few deaths and little illness in domesticated adults and lambs (Martin 1996, Drew 2017). Contact can and does occur between animals from range use overlap on public land and forays of wild sheep to nearby domestic herds on private in-holdings and vice versa (Jansen et al. 2006). While not all outbreaks of pneumonia in wild sheep have confirmed contact with domestic sheep or goats, the preponderance of scientific evidence shows that association with domestic sheep and goats poses a threat to the continued conservation and restoration of wild sheep populations. For a recent review of the literature and summary of this issue see Pils and Wilder 2017.

Management alternatives to reduce the impacts of respiratory disease on wild sheep are limited. No effective vaccine or treatment for pneumonia in bighorn sheep exists (Wehausen et al. 2011). Maintaining appropriate and reasonable spatial and temporal separation between wild sheep and domestic sheep and goats is the most effective tool available for minimizing risk of disease transmission between species (WAFWA WSWG 2012). The Forest does not manage pack goat use or require practices to reduce the risk of contact with bighorn sheep.

Resource Indicator and Measure 2: Disturbance to Wildlife and Adequacy of Management Actions to Protect Wildlife

Listed Species

Canada Lynx (*Lynx canadensis*)

The wilderness areas contain parts of 9 Lynx Analysis Units (LAUs) (Table 10 and Table 11). Watershed biological assessments of the effects of ongoing projects to Canada lynx were completed in February 2003. As part of these analyses, baseline conditions for each LAU were

described and evaluated as to their ability to conserve lynx (available in the project record). The LAUs within the project area contain approximately 57,532 acres of lynx habitat, including approximately 9,946 acres of denning habitat.

No lynx populations have been documented recently within the Sawtooth NRA. From 1999 to 2001, the Forest Service conducted the National Lynx Detection Protocol within the Sawtooth NRA in the Sawtooth Valley and Stanley Basin. All hair samples collected from this survey were determined to be negative for lynx hair. One Idaho Natural Heritage database record of lynx within the Cecil D. Andrus-White Clouds Wilderness area was observed in the 1960s and 3 records within 1 mile of the wilderness areas was reported in 1960s. The most recently confirmed sightings of lynx tracks in the Sawtooth NRA occurred during winter 1997 near the Fishhook Creek drainage, approximately 8 air miles from the wilderness areas. Trapping records from the 1960s and 1970s show that lynx occurred throughout the Salmon River watershed on the Sawtooth NRA (IDFG 2017).

Behaviorally, lynx are generally tolerant of humans but also exhibit a wide variety of behavioral responses to human presence (Ruediger et al. 2000). Lynx can be sensitive to human activities around den sites in late May and June, and the presence of human activity may lead to abandonment of the site, possibly affecting kitten survival (Claar et al. 1999). When foraging, lynx may be able to adapt to regular and concentrated recreational use if adequate security habitat is available, since most human activity occurs during the day and lynx are known to be active at night (Ruediger et al. 2000). However, lynx may be less tolerant of human activity in habitats that are fragmented and restricted in extent as in central Idaho (Koehler and Aubrey 1994).

Table 10. Lynx Analysis Units and acres of lynx habitat within the Hemingway-Boulders Wilderness area (denning habitat is a subset of foraging habitat)

Lynx Analysis Unit	Lynx Habitat within Hemingway-Boulder Wilderness Area									
	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)
Baker-Fox-Leroux	504	64	0	0	0	0	0	0	504	64
Upper North Fork Big Wood-Easley	6,119	987	142	1	62	5	1	0	6,324	993
Upper Big Wood	893	13	0	0			0	0	893	13
Upper East Fork Salmon	12,111	2,299	53	13	28	3	0	0	12,192	2,315
Slate-Sullivan-Big Lake-Boulder	76	1	0	0	0	0	0	0	76	1
Total	19,703	3,364	195	14	90	8	1	0	19,989	3,386

Table 11. Lynx Analysis Units and acres of lynx habitat within the Cecil D. Andrus-White Clouds Wilderness area (denning habitat is a subset of foraging habitat)

Lynx Analysis Unit	Lynx Habitat within Cecil D. Andrus-White Clouds Wilderness Area									
	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)	Foraging (acres)	Denning (acres)
Pole-Germania	2,011	148	24	8	6	0	51	1	2,092	157
Upper Warm Springs-Swimm-Martin	9,493	1,413	152	12	0	0	0	0	9,645	1,425
Casino-Rough	6,232	1,093	0	0	0	0	0	0	6,232	1,093
Robinson Bar-Beaver	11,444	2,282	65	6	0	0	0	0	11,509	2,288
Slate-Sullivan-Big Lake-Boulder	7,620	1,530	284	40	103	16	58	11	8,065	1,597
Total	36,800	6,466	525	66	109	16	109	12	37,543	6,560

Wolverine (Gulo gulo)

The entire Cecil D. Andrus-White Clouds Wilderness and Hemingway-Boulder Wilderness provide habitat for wolverines, and approximately 86,150 acres, where snow persists into late May, provide reproductive denning habitat. The population trend for wolverine is unknown within the Sawtooth NRA and wilderness areas. A recent study in central Idaho investigating the influence of backcountry winter recreation on wolverine movements and reproductive denning included the wilderness areas. Data from this study, which involved live-trapping and instrumenting animals with GPS-collars, documented 5 individuals within the wilderness areas, 3 of which had large portions of their home ranges in the wilderness areas. One reproductive den site was located in the Cecil D. Andrus-White Clouds Wilderness (Heinemeyer and Squires 2012).

During winter, wolverines may avoid areas where recreation or other human activity occurs (Krebs et al. 2007). Additionally, female wolverines are sensitive to disturbance during mid-February through May while they are searching for, establishing, and occupying their reproductive dens. During this time, females are lactating, and disturbance, which leads to increased energy expenditure, can be very detrimental. It is a critical time for females because they must maintain energy levels to properly nourish their kits. During studies in Alaska and Idaho, females were documented moving kits after encounters with researchers (Magoun and Copeland 1998). During summer in central Idaho, Copeland and others (2007) found that wolverines avoided roads, although it is not certain whether this is a cause-effect relationship or due to wolverines' tendency to occupy areas that are not conducive to road-building.

Species of Concern

Table 12 lists the wildlife species of concern that may occur in the wilderness areas. Species of concern designations include Forest Service Sensitive Species, Forest Service MIS, BLM Sensitive Species, and Idaho State Species of Greatest Conservation Need (SGCN). Forest Service Sensitive Species are designated by the Regional Forester whose population viability may be a concern as evidenced by a current or predicted downward trend in population numbers or density, or a current or predicted downward trend in habitat capability that would reduce a species' existing distribution. BLM Sensitive Species are native species found on BLM-administered lands for which the BLM has the capability to significantly affect the conservation status of the species through management and either there is information that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range, or the species depends on ecological refugia or specialized or unique habitats on BLM-administered lands, and evidence exists that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk. SGCN were taken from Idaho's State Wildlife Action Plan (IDFG 2016). Their status is determined using an objective rule-based process to evaluate all animals thought by experts to be a candidate for SGCN. This process was designed specifically to reduce subjectivity and to obtain an objective State rank for species considered for inclusion as SGCN. Factors included, but were not limited to, information about population size, trend, viability, environmental specificity, threats, and protection status.

Table 12 includes species with known occurrences and species not documented but with habitat in the wilderness areas.

Table 12. Species of concern (vertebrates) within the Cecil D. Andrus-White Clouds and Hemingway-Boulder Wilderness Management Plan project area

Species	Status	Habitat in the Project Area
Spotted Bat (<i>Euderma maculatum</i>)	USFS Sensitive	All vegetation types
Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>)	USFS Sensitive, BLM Sensitive, Idaho SGCN	All vegetation types
Big Brown Bat (<i>Eptesicus fuscus</i>)	BLM Sensitive	All vegetation types
Hoary Bat (<i>Lasiurus cinereus</i>)	BLM Sensitive, Idaho SGCN	All vegetation types
Silver-haired Bat (<i>Lasionycteris noctivagans</i>)	BLM Sensitive, Idaho SGCN	All vegetation types
Pallid Bat (<i>Antrozous pallidus</i>)	BLM Sensitive	All shrub, deciduous forest, and riparian vegetation types
Fringed Myotis (<i>Myotis thysanodes</i>)	BLM Sensitive	All vegetation types
Little Brown Myotis (<i>Myotis lucifugus</i>)	BLM Sensitive, Idaho SGCN	All vegetation types
Long-eared Myotis (<i>Myotis evotis</i>)	BLM Sensitive	All vegetation types
Long-legged Myotis (<i>Myotis volans</i>)	BLM Sensitive	All vegetation types
Western Small-footed Myotis (<i>Myotis ciliolabrum</i>)	BLM Sensitive, Idaho SGCN	All vegetation types
Yuma Myotis (<i>Myotis yumanensis</i>)	BLM Sensitive	All vegetation types
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	USFS Sensitive, BLM Sensitive, Idaho SGCN	Sagebrush
Gray Wolf (<i>Canis lupus</i>)	USFS Sensitive, BLM Sensitive	All vegetation types
Fisher (<i>Pekania pennanti</i>)	USFS Sensitive, BLM Sensitive, Idaho SGCN	All forest and riparian vegetation types

Species	Status	Habitat in the Project Area
Mountain Goat (<i>Oreamnos americanus</i>)	Idaho SGCN	Alpine, High elevation mountain shrub
Bighorn Sheep (<i>Ovis canadensis</i>)	USFS Sensitive, BLM Sensitive, Idaho SGCN	All vegetation types
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	USFS Sensitive, BLM Sensitive	Lakes and riparian vegetation types
Golden Eagle (<i>Aquila chrysaetos</i>)	BLM Sensitive, Idaho SGCN	All vegetation types
Northern Goshawk (<i>Accipiter gentilis</i>)	USFS Sensitive, BLM Sensitive, Sawtooth National Forest Management Indicator	All forest vegetation types
Ferruginous Hawk (<i>Buteo regalis</i>)	BLM Sensitive	Sagebrush and Mountain Shrub
Peregrine Falcon (<i>Falco peregrinus</i>)	USFS Sensitive	All vegetation types
Greater Sage-grouse (<i>Centrocercus urophasianus</i>)	USFS Sensitive, Sawtooth National Forest Management Indicator, BLM Sensitive, Idaho SGCN	All shrub and non-forest riparian vegetation types
Great Gray Owl (<i>Strix nebulosi</i>)	USFS Sensitive, Idaho SGCN	All forest and riparian vegetation types
Flammulated Owl (<i>Psilosops flammeolus</i>)	USFS Sensitive, BLM Sensitive	All forest and riparian vegetation types
Boreal Owl (<i>Aegolius funereus</i>)	USFS Sensitive	All forest and riparian vegetation types
Short-eared Owl (<i>Asio flammeus</i>)	BLM Sensitive, Idaho SGCN	All shrub and riparian vegetation types
Common Nighthawk (<i>Chordeiles minor</i>)	Idaho SGCN	All vegetation types
Northern Three-toed Woodpecker (<i>Picoides dorsalis</i>)	USFS Sensitive	All forest and riparian vegetation types
Pileated Woodpecker (<i>Dryocopus pileatus</i>)	Sawtooth National Forest Management Indicator	All forest and riparian vegetation types
Lewis' Woodpecker (<i>Melanerpes lewis</i>)	BLM Sensitive, Idaho SGCN	Conifer and deciduous forest types
Olive-sided Flycatcher (<i>Contopus cooperi</i>)	BLM Sensitive, Idaho SGCN	Conifer forest types
Clark's Nutcracker (<i>Nucifraga columbiana</i>)	Idaho SGCN	Conifer forest types
Willow Flycatcher (<i>Empidonax traillii</i>)	BLM Sensitive	Non-forest riparian vegetation types
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	BLM Sensitive	Sagebrush and Mountain Shrub
Sage Thrasher (<i>Oreoscoptes montanus</i>)	BLM Sensitive, Idaho SGCN	Sagebrush
Green-tailed Towhee (<i>Pipilo chlorurus</i>)	BLM Sensitive	Sagebrush and Mountain Shrub
Brewer's Sparrow (<i>Spizella breweri</i>)	BLM Sensitive	Sagebrush
Sagebrush Sparrow (<i>Artimisiospiza nevadensis</i>)	BLM Sensitive, Idaho SGCN	Sagebrush
Black Rosy-finch (<i>Leucosticte atrata</i>)	Idaho SGCN	Conifer forest types
Western/Boreal Toad (<i>Anaxyrus boreas</i>)	BLM Sensitive, Idaho SGCN	Lakes, wetlands, and riparian vegetation types
Columbia Spotted Frog (<i>Rana luteiventris</i>)	USFS Sensitive	Lakes, wetlands, and riparian vegetation types

Migratory Birds

The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings. EO 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices into agency activities and to avoid or minimize, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions.

Additional direction comes from the MOU between USDA Forest Service and USDI Fish and Wildlife Service, signed December 2008 and extended to 2017, which identifies specific activities for bird conservation pursuant to EO 13186 including analysis of effects on migratory birds.

As described in Chapter 2, vegetation and structure in the area are diverse, which provides habitat for several species of birds. Species of birds of concern that breed or migrate through the area are listed in Table 13.

Trends from the Breeding Bird Survey for either Idaho or the Northern Rockies Bird Conservation Region (depending on what data was available) are listed in Table 13 also. Some information is available on species occurrence on the Forest from point count surveys conducted Forest-wide over 8 years between 2000 and 2015, though sample sizes from these surveys are too small for determining local trends on the Sawtooth NRA. The species in this list require varying types of forest structure, sagebrush, and/or riparian/wetland areas for all or part of their habitat needs during the year (Table 14).

Table 13. Bird species of concern that occur or have habitat in the project area and their status

Species	Partners in Flight Status ^a	Idaho State Species of Greatest Conservation Need ^b	US Fish and Wildlife Service Birds of Conservation Concern ^c	Forest Service Intermountain Region Sensitive Species/BLM Challis Field Office Sensitive Species	Breeding Bird Survey Trend ^d %/year (bold indicates significant trend)
Bald Eagle			X	USFS, BLM	3.9 (WR)
Golden Eagle		Tier 2		BLM	NA
Northern Goshawk				USFS, BLM	-1.07 (NR)
Ferruginous Hawk		Tier 2	X	BLM	1.78 (ID)
Swainson's Hawk			X		2.11 (ID)
Peregrine Falcon			X	USFS	NA
Greater Sage-grouse	Yellow Watch, Reverse Decline	Tier 1		USFS, BLM	-1.55 (WR)
Great Gray Owl		Tier 3		USFS, BLM	NA
Flammulated Owl	Yellow Watch, Prevent Decline		X	USFS, BLM	NA
Long-eared Owl	Yellow Watch, Reverse Decline				NA
Short-eared Owl		Tier 3	X	BLM	-0.95 (WR)
Boreal Owl				USFS	NA
Common Nighthawk		Tier 3			-1.76 (ID)
Calliope Hummingbird			X		-1.74 (ID)
Rufous Hummingbird	Yellow Watch, Reverse Decline		X		-1.98 (WR)
Lewis' Woodpecker	Yellow Watch, Reverse Decline	Tier 2	X	BLM	-2.86 (WR)
Williamson's Sapsucker			X		-1.18 (NR)
Three-toed Woodpecker				USFS	NA
Olive-sided Flycatcher	Yellow Watch, Reverse Decline	Tier 3	X	BLM	-3.62 (ID)
Willow Flycatcher			X	BLM	-1.15 (ID)

Species	Partners in Flight Status ^a	Idaho State Species of Greatest Conservation Need ^b	US Fish and Wildlife Service Birds of Conservation Concern ^c	Forest Service Intermountain Region Sensitive Species/BLM Challis Field Office Sensitive Species	Breeding Bird Survey Trend ^d %/year (bold indicates significant trend)
Loggerhead Shrike	Common, Steep Decline		X	BLM	-1.04 (WR)
Clark's Nutcracker		Tier 3			1.55 (ID)
Horned Lark	Common, Steep Decline				-1.8 (ID)
Sage Thrasher		Tier 2	X	BLM	-1.67 (ID)
Green-tailed Towhee			X	BLM	-3.0 (ID)
Brewer's Sparrow			X	BLM	-1.31 (ID)
Fox Sparrow			X		-2.25 (ID)
Brewer's Blackbird	Common, Steep Decline				-2.35 (ID)
Black Rosy-finch	Red Watch	Tier 3	X		NA
Cassin's Finch	Yellow Watch, Reverse Decline		X		-1.3 (ID)
Pine Siskin	Common, Steep Decline				-2.76 (ID)
Evening Grosbeak	Yellow Watch, Reverse Decline				-3.3 (ID)

^aSpecies of Continental Importance in the Intermountain West Avifaunal Biome based on Partners in Flight American Landbird Conservation Plan (Rosenberg et al. 2016).

Watch Species—species determined to be vulnerable based on the combination of the six following factors – population size, breeding distribution, nonbreeding distribution, threats to breeding, threats to nonbreeding, population trend

Red—species with relatively high scores for all vulnerability factors

Yellow, Prevent Decline—species with high vulnerability scores for restricted ranges and small populations with moderate threats and stable or increasing trends.

Yellow, Reverse Decline—species with high population trend scores and moderate to high threats as well as moderate population sizes but low vulnerability scores for range.

Common, Steep Decline—species that are still too numerous or widely distributed to warrant Watch List status, but that are experiencing troubling long-term declines.

^bTier 1—species with the most critical conservation needs, taxa that may be heading toward the need for ESA listing; Tier 2—species with longer-term vulnerabilities or patterns suggesting management intervention is needed but not necessarily facing imminent extinction or having the highest management profile; Tier 3—species that are relatively more common and have either declining trends rangewide or are lacking in information

^cUSFWS Birds of Conservation Concern in the Northern Rockies Bird Conservation Region—Designated by USFWS (2008) and determined using assessment scores from three sources including Partners in Flight North American Landbird Conservation Plan, US Shorebird Conservation Plan, and the North American Water Bird Conservation Plan. List was generated from the USFWS Information for Planning and Conservation application for Hemingway-Boulders White Clouds Wilderness Plan Project and reviewed by R. Garwood for occurrences in the project area. Two species from the Information for Planning and Conservation list (western grebe and long-billed curlew) do not occur in the project area and are not included in this analysis.

^dFrom Breeding Bird Survey data (Sauer et al 2017). S=Survey-wide, NR=Northern Rockies, WR=Western Region (US and Canada west of Rocky Mountains), ID=Idaho, NA=no or insufficient data available. Trend estimates are shown for the smallest region with the most sufficient data available.

Table 14. Bird species of concern that occur or have habitat in the wilderness areas

Species	Habitat	Nest Substrate	Season of Use in Project Area
Bald Eagle	Conifer and riparian forest	tree	year round
Golden Eagle	Forest, sagebrush, and meadows near cliffs	cliff	year round
Northern Goshawk	Conifer Forest	tree	year round
Ferruginous Hawk	Sagebrush	tree	spring, fall migration
Swainson's Hawk	Forest adjacent to sagebrush and meadows	tree	spring, summer, fall
Peregrine Falcon	Forest, sagebrush, and meadows near cliffs	cliff	spring, summer, fall
Greater Sage-grouse	Sagebrush	ground	spring, summer, fall
Great Gray Owl	Conifer forest near wet meadows	tree	year round
Flammulated Owl	Forest, mixed conifer, snags	tree cavity	spring, summer, fall
Long-eared Owl	Forest, shrub riparian	tree	spring, summer, fall
Short-eared Owl	Sagebrush, wet meadows	ground	spring, summer, fall
Boreal Owl	Forest, mixed conifer, snags	tree cavity	year round
Common Nighthawk	Open forest, sagebrush, meadow	ground	spring, summer, fall
Calliope Hummingbird	Riparian areas	tree, shrub	spring, summer, fall
Rufous Hummingbird	Riparian areas	tree, shrub	spring, summer, fall
Lewis' Woodpecker	Forest, snags	tree cavity	spring, summer, fall
Williamson's Sapsucker	Aspen and conifer forests, snags	tree cavity	spring, summer, fall
Three-toed Woodpecker	Conifer forest, snags	tree cavity	year round
Olive-sided Flycatcher	Conifer forest	tree	spring, summer, fall
Willow Flycatcher	Riparian areas	shrub	spring, summer, fall
Loggerhead Shrike	Sagebrush	tree, shrub	spring, summer, fall
Clark's Nutcracker	Conifer forest	tree	year round
Horned Lark	Meadow, sagebrush	ground	spring, summer, fall
Sage Thrasher	Sagebrush	shrub, ground	spring, summer, fall
Green-tailed Towhee	Mountain shrub, sagebrush	shrub, ground	spring, summer, fall
Brewer's Sparrow	Sagebrush	shrub, ground	spring, summer, fall
Fox Sparrow	Riparian	tree, shrub, ground	spring, summer, fall
Brewer's Blackbird	Sagebrush, meadow	tree, shrub, ground	spring, summer, fall
Black Rosy-finch	Alpine meadow	cliff, talus	spring, summer, fall
Cassin's Finch	Conifer forest	tree	year round
Pine Siskin	Conifer forest	tree	year round
Evening Grosbeak	Conifer forest	tree, shrub	spring, summer, fall

3.4.3. Environmental Consequences

Resource Indicator and Measure 1: Risk of Contact between Bighorn Sheep and Pack Goats

Direct and Indirect Effects

Alternative A—Proposed Action

Alternative A would prohibit pack goat use within the approximately 26,774-acre core use area of the East Fork bighorn sheep herd from spring through fall within the Cecil D. Andrus-White Clouds Wilderness. Additionally, 8 management practices to minimize the risk of contact between pack goats and bighorn sheep would be enforced within both wilderness areas where pack goats are allowed. These standards would reduce the risk of contact compared to the existing condition, which has no management practices in place to reduce risk of contact. Outside of the pack goat prohibited areas of the wildernesses, some risk of contact would still exist.

Alternative B—Natural-Focus

Alternative B would prohibit pack goat use within the boundaries of both wilderness areas. Successful implementation of this management action would reduce risk of contact to almost zero within the wilderness areas because pack goats would not be present to potentially transmit diseases.

Alternative C—Minimum Management

Alternative C would not provide direction or standards for managing pack goats. Risk of contact would remain unchanged from the existing condition.

Cumulative Effects

Neither the Forest Service nor the BLM have direction or standards for managing pack goats. Risk of contact between bighorn sheep and pack goats outside of the wilderness areas would remain the same as the existing condition. However, due to the reduced risk within the wilderness areas from the closure area and implementation of the management practices, overall risk within the cumulative effects area would be reduced under Alternative A. Under Alternative B, due to the reduced risk within the wilderness areas from the prohibition of pack goats, overall risk within the cumulative effects area would be reduced and at a level lower than Alternative A. Under Alternative C, overall cumulative risk of contact would remain unchanged from the existing condition.

Resource Indicator and Measure 2: Disturbance to Wildlife and Adequacy of Management Actions to Protect Wildlife

Potential Effects Common to All Alternatives

Wildlife can be affected by human recreational activities in a variety of ways, including direct and indirect mortality, reduced use of habitat, behavior alteration resulting in reduced reproductive or survival rates, and habitat alteration resulting in reduced habitat quality. The type of impact depends on the frequency, intensity, location, timing, predictability, and type of use, as well as the type of animal including its size, group size, sex, age, and niche (Knight and Cole 1995). A wide variety of impacts from recreation on the species of interest addressed in this

analysis are identified in literature. In most cases, these impacts are negative, with only a few positive accounts reported. Impacts on species from recreational trails and camping within the wilderness areas can be categorized as follows (Wisdom et al. 1999, Wisdom et al. 2000, Gaines et al. 2003, Snetsinger and White 2009):

- ***Breeding/Rearing Disturbance***—Species that are considered generally tolerant of human activity may experience higher levels of disturbance at breeding and rearing sites. This disturbance may result in reduced attentiveness to young, disruption of feeding patterns, abandonment of nests and dens, and/or cause adults to undertake additional risks to move their young to a new location. Several studies have investigated impacts of human presence on songbirds and found negative responses. Gutzwiller and others (1997) detected curtailments of singing activity in some species in the presence of hikers and thought this response may reduce breeding activity and quality of those sites for young. Gutzwiller and Anderson (1999) found lower numbers of individuals of some common species in sites with human intrusions compared to sites without disturbance. Bighorn sheep have been reported to respond negatively to human disturbance (elevated heart rate and avoidance of routes and/or traditional lambing areas) including hikers, hikers with dogs, mountain bikers, and roads (MacArthur et al. 1979, MacArthur et al. 1982, Papouchis et al 2001, Pelletier 2006, Weidmann and Bleich 2014). Because wild canids are the major predator of wild sheep, dogs are perceived as threats to sheep and several human disturbance studies have shown that wild sheep show increased alarm responses, including increased heart rate, toward dogs (MacArthur et al. 1979, MacArthur et al. 1982, Pelletier 2006). The cumulative effects of these responses may affect metabolic rates and energy balance. Additionally, if sheep perceive an area as high predation risk, it could lead to habitat abandonment.
- ***Displacement/Avoidance***—Many species often move away from human activity or intentionally avoid areas of human activity. Taylor and Knight (2003) investigated the interactions of wildlife and trail users (hikers and mountain bikers). Their observations showed that 70% of animals located within 330 feet of a trail were likely to flee when a trail user passed. Areas may also be avoided due to habitat changes, such as soil compaction or vegetation change, associated with the area. Animals displaced by recreation are less likely to survive and reproduce where habitat is unfamiliar or inferior (Gutzwiller 1995). Recreation intensity has been shown to be negatively correlated with bird densities of some species (van der Zande et al. 1984). Repeated human disturbance can result in displacement or abandonment of a territory, leading to reproductive failure if no unoccupied territory is nearby that is free from disturbance (Riffell et al. 1996). Kangas and others (2010) found a strong negative effect from trail use on ground nesting species that nested along trails. Gutzwiller and others (1998) and Mallord and others (2007) also found a lower tolerance of humans by birds that were active nearer the ground.

- **Habitat Fragmentation and Alteration**—Recreational trails, campsites, and stock grazing can result in habitat alteration and fragmentation through vegetation removal and trampling, invasive species spread, and change in species composition (Leung and Marion 2000, Barros and Pickering 2017). Forest fragmentation is a concern for some bird species. Hickman (1990) found nest predators and cowbirds attracted to trail corridors 4 to 6 feet wide. Miller and Hobbs (2000) also note that predation of songbird nests was greater closer to forested hiking trails. Miller and others (1998) found generalist species more common near trails with specialist species less common, and nest predation greater near trails. In addition to increased fragmentation, trail construction sometimes results in the loss of important habitat structural components.
- **Stress/Physiological Response**—Studies of heart rates and fecal glucocorticoid levels have shown stress responses to human activity. Chronic stress can make species susceptible to illness and reduce individual fitness (Gabrielsen and Smith 1995).
- **Snag/Downed Wood Reduction**—Snags and downed wood are used for cover, nesting, and denning and are key habitat components for some species. Snags are used for foraging and nesting by many priority bird species that occur in the project area (Table 14). These components may be lost through trail development, removal of hazard trees, and campfires at camp sites (Hall and Farrell 2001).

Table 15 summarizes these effects to species of concern in the project area.

Direction in each alternative for managing recreational activities that would likely influence wildlife and wildlife habitat and potentially mitigate effects to wildlife can be grouped into the following categories: group size, campfires, recreational stock grazing, recreational stock use, commercial services, and education (Table 16).

Table 15. Potential effects to species of concern from recreational activities

Species	Breeding and Rearing Disturbance	Displacement and Avoidance	Habitat Alteration	Stress/Physiological Response	Snag and Downed Wood Reduction
Canada Lynx	x	x	x		x
Wolverine (<i>Gulo gulo</i>)	x	x	x	x	x
Spotted Bat	x	x	x		
Townsend's Big-eared Bat	x	x	x		
Big Brown Bat	x	x	x		
Hoary Bat	x	x	x		x
Silver-haired Bat		x	x		x
Pallid Bat	x	x	x		x
Fringed Myotis	x	x	x		
Little Brown Myotis	x	x	x		x
Long-eared Myotis	x	x	x		x
Long-legged Myotis		x	x		x
Western Small-footed Myotis	x	x	x		x
Yuma Myotis	x	x	x		
Pygmy Rabbit	x	x	x		
Gray Wolf	x		x		

Species	Breeding and Rearing Disturbance	Displacement and Avoidance	Habitat Alteration	Stress/ Physiological Response	Snag and Downed Wood Reduction
Fisher		x	x		x
Mountain Goat		x	x		
Bighorn Sheep	x	x	x	x	
Bald Eagle		x	x	x	
Golden Eagle	x	x	x	x	
Northern Goshawk	x	x	x		x
Ferruginous Hawk		x	x		
Peregrine Falcon	x	x	x		
Greater Sage-grouse		x	x		
Great Gray Owl	x	x	x		x
Flammulated Owl	x	x	x		x
Boreal Owl	x	x	x		x
Short-eared Owl	x	x	x		
Common Nighthawk	x	x	x		
Northern Three-toed Woodpecker			x		x
Pileated Woodpecker			x		x
Lewis' Woodpecker			x		x
Olive-sided Flycatcher	x	x	x		
Clark's Nutcracker	x	x	x		x
Willow Flycatcher	x	x	x		
Loggerhead Shrike	x	x	x		
Sage Thrasher	x	x	x		
Green-tailed Towhee	x	x	x		
Brewer's Sparrow	x	x	x		
Sagebrush Sparrow	x	x	x		
Black Rosy-finch	x	x	x		
Western/Boreal Toad	x	x	x		x
Columbia Spotted Frog	x	x	x		x
Migratory birds	x	x	x	x	x

Table 16. Proposed direction by alternative that may affect disturbance to wildlife and wildlife habitat

Category	Direction	Alternative A Proposed Action	Alternative B Natural-Focus	Alternative C Minimum Management
Group Size	Standard	Limit group size to a maximum of 12 people	Limit group size to a maximum of 8 persons in Zone 1 and 12 persons in Zones 2, 3, and 4	Limit group size to a maximum of 20 persons
	Standard	Limit the combined number of recreational stock in one group to 14 head of stock	Limit the combined number of pack in saddle stock in one group to a maximum of 10 animals in Zone 1 and 14 animals in Zones 2, 3, and 4	The following is prohibited: being in the area with a combined number of recreational stock in excess of 25 animals.

Category	Direction	Alternative A Proposed Action	Alternative B Natural-Focus	Alternative C Minimum Management
Campfires	Standard	Campfires are allowed below 8,800 feet elevation, and within 200 yards of Walker, Island, Upper and Lower Chamberlain (9,477 feet and 9,197 feet) and Boorn Lakes	Campfires are only allowed in Zones 3 and 4	Building, maintaining, attending, or using campfires within 200 yards of the following lakes: Cirque, Cove, Sapphire, Sheep, Slide, Tin Cup, Gunsight, Four Lakes Basin, Scree, Shallow, Castle, and Chamberlain 9849 is prohibited
Recreational Stock Grazing	Standard	Grazing by recreational stock within 200 feet of lakes, streams or springs is prohibited	Same as A	No direction
Recreational Stock Use	Standard	Tethering recreational stock is not allowed within 200 feet of lakes, streams and springs, with the exception of agency provided tie-up sites where topography does not allow for tethering more than the 200 feet from lakes, streams, and springs.	Same as A	Tethering recreational stock within 100 feet of springs, lakes, or streams is prohibited.
	Standard	Recreational stock use, with the exception of pack goats and llamas, is prohibited within the following drainages: Slickenslide Creek above Quiet Lake, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Walker and Island Lakes	Recreational stock use, except for pack goats and llamas, is prohibited within the following drainages: Slickenslide Creek, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Walker and Island Lakes	No direction

Category	Direction	Alternative A Proposed Action	Alternative B Natural-Focus	Alternative C Minimum Management
Commercial Services	Standard	Assigned campsites for outfitters and guides will only be authorized in Zones 3 and 4 and will be located to reduce conflicts with non-outfitted users and to protect sensitive areas. Allow spike and drop camps away from high-use areas and authorize on a case-by-case basis. Progressive camping would be allowed as per Outfitter Operating Plan and annual itinerary.	Same as A	No direction
	Standard	Ensure operating plans for priority use and temporary use outfitting and guiding permits direct outfitters to model appropriate wilderness practices and incorporate awareness of wilderness values in their interaction with clients and others	Same as A	No direction
Education	Guideline	Prevent human/wildlife encounters by emphasizing proper camping techniques and food storage and containment	Same as A	No direction
	Guideline	Discourage off-trail route marking and remove user-created route markers, such as stacked rocks, flagging.	Same as A	No direction
	Guideline	Encourage use of no trace fires (i.e. use of fire pans or fire blankets)	Same as A	No direction

Category	Direction	Alternative A Proposed Action	Alternative B Natural-Focus	Alternative C Minimum Management
	Guideline	Emphasize a proactive approach to wilderness education. Build partnerships and relationships with organization camps, group organizations, businesses, school and university programs, permittees, permanent and seasonal staff, and other users to integrate Leave No Trace and wilderness ethics into their operations.	Same as A	No direction

Direct and Indirect Effects

Alternative A—Proposed Action

Listed Species

Canada Lynx

Disturbances caused by human and stock presence would continue to exist within lynx habitat. The reduction in group size from the existing condition would not likely be substantial enough to positively or negatively affect lynx occurrence in the wilderness areas.

Snowshoe hare, dusky grouse, and red squirrels all occur within the wilderness areas. Foraging habitat quality would increase with the stock grazing and use changes.

No change in habitat access would occur under Alternative A.

The reduction in stock grazing and use areas would likely improve foraging habitat for lynx. Approximately 83 acres of foraging habitat occur within the equine stock use closure areas and approximately 5,690 acres occur within the pack goat closure area with 83 acres of overlap. Where campfires are prohibited within lynx habitat, both foraging and denning habitat would likely improve (approximately 4,256 acres of foraging habitat and 737 acres of denning habitat) from dead and downed wood retention.

Alternative A would not result in greater than 30% of predicted lynx habitat in unsuitable condition within the LAUs as directed by Forest Plan TEST15 (USDA Forest Service 2012).

No change in habitat disturbance from fires or large-scale vegetation projects would occur under this alternative.

Implementing Alternative A would benefit lynx habitat by improving lynx foraging habitat by reducing stock grazing and use. It would benefit lynx denning habitat where campfire restrictions exist by retaining downed wood.

Wolverine

Disturbances caused by human and stock presence would continue to exist within wolverine habitat. The reduction in group size from the existing condition would not likely be substantial enough to change wolverine distribution and movements from the existing condition. Recreation Resources Standard 2176 to “Manage winter recreation to minimize conflict with high elevation wildlife species including mountain goats and wolverine.” would remain, continuing to provide some protection to reproductive denning areas.

Campfires would not be allowed above 8,800 feet, which would result in more snag and downed wood retention in these fragile areas (not including the exceptions), benefitting prey species of wolverine and improving wolverine denning habitat (approximately 60,110 acres in both wilderness areas combined).

Recreational stock grazing would not be allowed within 200 feet of lakes, streams, and springs. Additionally, equine stock use would not be allowed within approximately 7,290 acres in the Boulder Chain Lakes area above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Island and Walker Lakes and pack goats would not be allowed in approximately 26,774 acres of bighorn sheep range (approximately 5,084 acres overlap with the equine stock closure area). This area is wolverine habitat and approximately 80% of this area is potential wolverine denning habitat. This direction would improve riparian vegetation and soil compaction over existing conditions, benefitting wolverine prey species.

Direction for commercial use of the wilderness areas and direction for education of wilderness visitors would help prevent expansion of impacts to wolverine habitat from the existing condition.

Species of Concern and Migratory Birds

Group size of both people and recreational stock would be smaller than currently allowed in the wilderness areas (Table 16). Though disturbances caused by human and stock presence would continue to exist, with smaller group sizes, an increase in negative effects from the existing condition would not be expected.

Campfires would generally not be allowed above 8,800 feet, which would result in more snag and downed wood retention in these fragile areas, thus benefitting many species of concern (Table 16).

Recreational stock grazing would not be allowed within 200 feet of lakes, streams, and springs. Additionally, equine stock use would not be allowed within approximately 7,290 in the Boulder Chain Lakes area above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Island and Walker Lakes, and pack goats would not be allowed in approximately 26,774 acres of bighorn sheep range (approximately 5,084 acres overlap with the equine stock closure area). This direction would improve riparian vegetation and soil compaction over existing conditions benefitting multiple species of concern.

Direction for commercial use of the wilderness areas and direction for education of wilderness visitors would help prevent expansion of impacts to wildlife and wildlife habitat from the existing condition.

Alternative B—Natural-Focus

Listed Species

Canada Lynx

Disturbances caused by human and recreational stock presence would continue to exist within lynx habitat and effects from Alternative B would be the same as Alternative A. Effects to snowshoe hare, dusky grouse, and red squirrels foraging habitat quality would be the same as described under Alternative A. No change in habitat access under this alternative either.

The reduction in recreational stock grazing and use areas would likely improve foraging habitat for lynx. Approximately 83 acres of foraging habitat are within the equine stock use closure areas (same as Alternative A) and pack goats would not be allowed within the boundaries of the wilderness areas. Very little lynx habitat is located within Zones 3 and 4 (Table 16 6 and 7) where campfires would be allowed under this alternative. However, where it occurs, both foraging and denning habitat would improve from dead and downed wood retention.

Alternative B would not result in greater than 30% of predicted lynx habitat in unsuitable condition within the LAUs as directed by Forest Plan TEST15 (USDA Forest Service 2012).

No change in habitat disturbance from fires or large-scale vegetation projects would occur under this alternative.

Implementing this alternative would benefit lynx habitat by improving lynx foraging habitat by reducing stock grazing and use. It would benefit lynx denning habitat where campfire restrictions exist by retaining dead and downed wood more than under Alternative A.

Wolverine

As in Alternative A, disturbances caused by human and stock presence would continue to exist within wolverine habitat. Group size restrictions would affect wolverine distribution and movements as described under Alternative A. Recreation Resources Standard 2176 would also remain and continue to provide some protection to reproductive denning areas.

Campfires would only be allowed in Zones 3 and 4 (approximately 1,145 acres), which would result in greater snag and downed wood retention than under Alternative A, benefitting prey species of wolverine and improving wolverine denning habitat (approximately 85,160 acres in both wilderness areas combined).

Recreational stock grazing would not be allowed within 200 feet of lakes, streams, and springs. Additionally, equine stock use would not be allowed within approximately 7,290 acres in the Boulder Chain Lakes area above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Island and Walker Lakes, and pack goats would not be allowed within the boundaries of the wilderness areas. This direction would improve riparian vegetation and soil compaction over existing conditions and Alternative A, benefitting prey species of wolverine.

Direction for commercial use of the wilderness areas and direction for education of wilderness visitors would improve wolverine habitat as described under Alternative A.

Species of Concern and Migratory Birds

Group size of people and recreational stock would be smaller than currently allowed in the wilderness areas and smaller than allowed under Alternative A. As described in Alternative A,

disturbances caused by human and stock presence would continue to exist; however, with smaller group size, effects would not increase from the existing condition.

Campfires would only be allowed in Zones 3 and 4 (approximately 1,145 acres), which would result in more snag and downed wood retention in these fragile areas than under Alternative A, benefitting many species of concern (Table 16).

Recreational stock grazing would not be allowed within 200 feet of lakes, streams, and springs. Additionally, equine stock use would not be allowed within approximately 7,290 acres in the Boulder Chain Lakes area above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Island and Walker Lakes, and pack goats would not be allowed within the boundaries of the wilderness areas. This direction would improve riparian vegetation and soil compaction over existing conditions and Alternative A, benefitting multiple species of concern.

Direction for commercial use of the wilderness areas and direction for education of wilderness visitors would help improve wildlife habitat from the existing condition as in Alternative A.

Alternative C—Minimum Management

This alternative would provide little direction or standards for reducing disturbance to wildlife, including species of concern, migratory birds, Canada lynx, and wolverine, from the existing condition.

Group size of both people and recreational stock would remain the same as existing condition. Disturbances caused by human and stock presence would continue to exist and likely expand.

Campfires would not be allowed within 200 yards of the 12 lakes currently closed to campfires (approximately 800 acres). Impacts to species that require dead and downed wood would continue or worsen outside of these areas.

Impacts to habitat from recreational stock grazing and use would likely maintain or worsen from existing condition.

Because no direction for commercial use of the wilderness areas or direction for education of wilderness visitors exists, these uses would likely maintain or worsen existing impacts to wildlife and wildlife habitat.

Cumulative Effects

The primary federal activities that have impacted terrestrial species of concern and their habitats on the Sawtooth NRA as well as within the north end of the Forest include construction and use of system and non-system roads, construction and use of motorized and non-motorized trails, past and present livestock grazing, pesticide and herbicide application, recreation and non-recreation special use permitted activities, developed recreation, water diversion structures and their operation, current and past timber harvest, current and past mining activity, personal use firewood cutting, and dispersed recreation. The cumulative effects area contains many potential human-caused sources of mortality for birds such as window strikes, power line collisions, fence collisions, vehicle collisions, house cat predation, and pesticide exposure.

Of these activities, livestock grazing, ongoing hazard tree removal, road and trail construction and maintenance (both permitted and unpermitted), and dispersed recreation have altered habitat for species of concern in the area by removing or degrading potential foraging, denning, and

nesting habitat. Herbicide application likely has had some negative effect for birds, amphibians, and small mammal prey species that may consume contaminated vegetation or contaminated insects, as well as amphibians, which may experience direct effects from herbicide exposure.

Foreseeable future actions within the area with potential effects to wildlife species of concern include travel management planning within the Big Wood River watershed. Part of this planning effort will involve reducing route density and restoring some existing unauthorized routes. Implementation of these actions is anticipated to begin in 2019. A prescribed burning and timber harvest project in the Stanley Lake Creek and Elk Creek watersheds of Stanley Basin is planned for implementation in 2018. This project would simultaneously remove and improve habitat for several species of concern.

Alternatives A and B are anticipated to slightly improve conditions for wildlife species of concern so would contribute positively toward cumulative effects. Alternative C would have no contribution to cumulative effects.

3.4.4. Summary

Table 17 summarizes the environmental effects of each alternative to wildlife resources.

Table 17. Summary comparison of environmental effects to wildlife resources

Indicator/Measure		Alternative A	Alternative B	Alternative C
Risk of contact between bighorn sheep and pack goats		Intermediate risk of contact among alternatives	Lowest risk of contact among alternatives	Highest risk of contact among alternatives
Disturbance to wildlife and adequacy of management actions to protect wildlife	Group Size	Impacts to wildlife and wildlife habitat would likely not increase from existing condition	Same as Alt A	Impacts to wildlife and wildlife habitat would be maintained or increase from existing condition
	Campfires	Habitat would improve from dead and downed wood retention in areas where campfires are prohibited	Habitat would improve from dead and downed wood retention in areas where campfires are prohibited. More area would be expected to improve than under Alt A	Impacts to wildlife and wildlife habitat would be maintained or increase from existing condition
	Recreational Stock Grazing and Use	Approximately 6,058 acres would be closed to recreational equine stock use and approximately 26,774 acres would be closed to pack goat use resulting in improved habitat conditions	Approximately 7,290 acres would be closed to recreational equine stock use and both wilderness areas would be closed to pack goat use resulting in improved habitat conditions	Impacts to wildlife and wildlife habitat would be maintained or increase from existing condition
	Commercial Use	Direction would help slow expansion of impacts to wildlife habitat	Same as Alt A	Impacts to wildlife and wildlife habitat would be maintained or increase from existing condition
	Education	Direction would help slow expansion of impacts to wildlife habitat	Same as Alt A	Impacts to wildlife and wildlife habitat would maintain or increase from existing condition

3.5. Botanical Resources, Vegetation, and Nonnative Plants

3.5.1. Introduction

This section addresses the effects of the proposed action and alternatives of the Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness WMP proposed by the Forest and BLM on ESA threatened, endangered, candidate, and proposed species, Forest Service Sensitive Species, BLM Special Status plant species, alpine and riparian vegetation, and invasive non-native plant species. These analyses are required by law, regulation or policy.

3.5.2. Resource Indicators and Measures

Concerns regarding plant species arise from recreational use in the wilderness. The following were chosen as analysis indicators and measures for this section as identified during scoping.

- Whitebark pine
 - Change in recreation site area and number, tree damage, campfire rings, or stock use impacts
- Alpine and riparian vegetation
 - Change in recreation site area and number, tree damage, campfire rings, or stock use impacts
- Invasive non-native plant populations
 - Increase in known invasive non-native species
- ESA candidate, Forest Service Sensitive, Forest Watch, or BLM Special Status plant species
 - Loss of occurrences and decrease in habitat quality from recreation activities

Direct and indirect effects are analyzed at the geographic scope of the areas encompassed by the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas.

Cumulative effects are analyzed at the geographic scope of the entire north end of the Forest (Fairfield Ranger District, Ketchum Ranger District, Sawtooth NRA). Temporal scope is defined as temporary (0–3 years), short term (3–15 years), and long term (+15 years).

The Sawtooth NRA is considered the cumulative effects boundary for whitebark pine, alpine and riparian vegetation, Forest Service Sensitive Species, Forest Watch Plant Species, and BLM Special Status plant species. The timeframe for cumulative effects from the alternatives would be long term.

3.5.3. Affected Environment

Resource Indicator and Measures 1 and 2: Whitebark Pine and Alpine and Riparian Vegetation

The landscape in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas and is diverse, rugged, and isolated. The elevational gradient spans 6,000 feet in elevation to 11,815 feet and supports wide vegetation diversity. Lower elevations in the wilderness include sagebrush steppe, interspersed with grassland and aspens. Coniferous forests

of subalpine fir, Douglasfir, and lodgepole pine occur at mid-elevations on steep slopes. High-elevation glaciated mountainous terrain includes lateral moraine; glacial cirques; sharp ridgelines; talus; and broad, level-crested ridges. The alpine area represents several plant communities including subalpine and alpine dwarf-shrub, cushion plant, alpine dry turf meadow, grassland, snowfield, fell-field, and whitebark woodland.

Whitebark occurs at elevations above 8,000 feet in pure whitebark or subalpine fir–whitebark co-dominate stands. Below this elevation, individual whitebark pines occur in the understory of Douglas-fir and lodgepole. These individuals are small saplings/trees less than 4 feet. Whitebark pine stands on the Forest and adjacent lands have substantial mortality caused by mountain pine beetle. White pine blister rust disease occurs frequently in stands on the Forest, and large tree mortality is becoming more frequent in infected stands. On the Forest, decades of fire suppression have led to both progressive loss of whitebark pine basal area and successional replacement by more shade-tolerant trees, such as subalpine fir. Whitebark stands near recreation sites are affected by firewood gathering, structure building, and stock tethering. Whitebark pine snags and dead branches are often used for fuelwood or to build campsite structures.

Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas contain portions of 5 watersheds in the Upper Salmon River subbasin and 3 watersheds in the Big Wood River subbasin. The major streams in the area are the East Fork Salmon River, Warm Springs Creek, Slate Creek, Big Boulder Creek, Little Boulder Creek, Germania Creek, West Pass Creek, and the North Fork of the Big Wood River. Approximately 158 lakes occur within Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. The Cecil D. Andrus-White Clouds Wilderness includes 46 named lakes of the 133 lakes, and the Hemingway-Boulders Wilderness includes 25 lakes, of which 4 are named. Alpine lakes are popular visitor destinations; some of these include Big Boulder and Little Boulder Chain Lakes, Chamberlain Basin Lakes, and Boorn and Amber Lakes.

Trampling of vegetation along trail corridors and recreation sites by human and recreational stock use occurs in the wilderness areas. While these impacts can be locally severe, they are currently insignificant at the ecosystem or landscape scale.

Recreational use at Boorn Lakes, Chamberlain Lakes, Boulder Chain Lakes and Big Boulder Lakes has resulted in fire scarred rock, unauthorized user created routes in sensitive vegetation, loss of and damaged ground cover, soil compaction and increased erosion. Some recreation sites are lacking dead and downed wood, and living trees have been damaged by firewood gathering, structure building, and stock tethering.

The current group size limit of 20 persons and 25 head of recreational stock (Special Order 0414-04-034) has affected vegetation resources from development of unauthorized user-developed routes, campsite expansion and sanitation concerns. Trailhead registration and wilderness ranger contacts indicate groups have occasionally exceeded the group size limit.

In areas where historic permitted livestock grazing occurred, vegetation communities are less resilient due to reduced species diversity and soil compaction. Soil compaction and erosion in riparian vegetation has resulted in mesic/hydric plant communities transitioning to species found in drier habitats. Fire exclusion has reduced wet meadows through conifer encroachment, and created stands of dense, small-diameter trees in areas that used to be dominated by widely spaced large trees.

Wilderness character monitoring conducted in 2016 indicates 238 recreation sites (campsite and stock areas) occur within the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. The Hemingway-Boulders Wilderness contains 14 of these sites with 9 (64%) of the recreation sites less than 500 square feet in size. The Cecil D. Andrus-White Clouds Wilderness area contains the remaining 224 sites, of which 114 sites (51%) are less than 500 square feet, and 39 sites (17%) are greater than 1,500 square feet. Stock use evidence (manure, feed or tree damage) occurs at 48 (20%) of the 238 recreation sites: 2 in the Hemingway-Boulders Wilderness and 46 in the Cecil D. Andrus-White Clouds Wilderness. Tree damage was found on 238 trees in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas: 14 trees in the Hemingway-Boulders Wilderness and 224 trees in the Cecil D. Andrus-White Clouds Wilderness. Of the sites recorded, 163 (68%) had 0% to 25% tree damage. Campfire evidence occurs in 213 (89%) recreation sites in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas: 11 (79%) in the Hemingway-Boulders Wilderness and 202 (90%) in the Cecil D. Andrus-White Clouds Wilderness.

Resource Indicator and Measure 3: Invasive, Nonnative Plant Species

Spotted and diffuse knapweed, scotch, musk, bull and Canadian thistle, yellow and Dalmatian toadflax, rush skeletonweed, leafy spurge, black henbane, hounds tongue, common tansy, and field bindweed are known to occur in or adjacent to the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness boundaries along roads and trails on private and public lands. Spotted knapweed occurs along Big and Little Boulder Trail; 4th of July Creek Road; Slate Creek Road; Salmon River Canyon; State Highway 75 along the Boulder front; and extensively along roads, trails, and recreation sites in the North Fork Big Wood River drainage. Dalmatian toadflax occurs in a large infestation in the Big Boulder drainage, at the trailhead, and along access roads and trails into the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. The Fourth of July drainage, including a reclaimed route (still in use by foot and wildlife); Martin Creek; Warm Springs Creek Trail; Big Casino Trail; Germania Trail; Little Redfish Lake; Slate Creek Road; Lower West Pass; East Fork Salmon River Trailhead and Trail; Bower Guard Station; Grandprize Trail; Pole Creek drainage; and North Fork Big Wood River drainage have yellow toadflax infestations directly adjacent to and leading into the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness. Invasive non-native annual grasses are becoming established along trails and stock use areas. The sites are typically south or west aspects and have continual disturbance.

Resource Indicator and Measure 4: ESA Candidate, Forest Service Sensitive, Forest Watch, and BLM Special Status Plant Species

The Forest has known occurrences and provides habitat for 45 Forest Service Sensitive plant species and Forest Watch plant species. Idaho Heritage Database records indicate known occurrences in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas of White Cloud milkvetch, whitebark pine, slender moonwort, Marsh's bluegrass, northern sagewort, wedge-leaf saxifrage, Mt. Shasta sedge, and pointed draba/rockcress draba. Northern sagewort, slender moonwort, silvery primrose, and Engelmann's/Brewer's sedge have known occurrences directly adjacent to the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas, and potential habitat for these species occurs within the wildernesses. BLM Special Status species known to occur within or near the wilderness include wavy-leaf thelypody, Challis milkvetch, Challis crazyweed, Lemhi milkvetch, and marsh felwort. Whitebark pine, currently a federal candidate for listing,

occurs at high-elevations throughout the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas.

3.5.4. Environmental Consequences

Direct and Indirect Effects

Summary of Effects that Occur on Vegetation Resources

Activities resulting from implementing each alternative which affect vegetation, such as direct removal, trampling, grazing, and invasive, non-native plant species introductions, could contribute to effects to botanical resources, depending on the type of impact, frequency, intensity, location, and timing. The potential for impacts exists primarily in high-elevation alpine vegetation, riparian vegetation, and at known occurrences of ESA Candidate, Forest Service Sensitive, Forest Watch, and BLM Special Status plant species. The degree of effect to these species and vegetation communities are discussed by alternative below. Effects to other species and vegetation groups are not addressed.

Direct Removal

The intentional removal of living vegetation is generally prohibited by the public with two exceptions: harvesting of specific edible plants and collection of firewood for campfires. Vegetation removal for administrative purposes may occur during trail maintenance and construction, for fire management, for scientific study, and for the removal of invasive plants. Removal of vegetation by grazing animals is addressed separately. Fire management, scientific study, vegetation removal for trail maintenance and construction, and invasive plant removal are addressed through program-specific.

The most common form of direct vegetation removal is the collection of firewood for campfires. Firewood collection that takes the form of felling trees and cutting limbs can create wounds, leaving trees more susceptible to insect and fungal attacks that can lead to tree mortality (Reid et al 2005). Campfires can impact vegetation by removing firewood and associated trampling that greatly enlarge the area affected by camping activities (Cole 1989a). A study in the Sierra Nevada region found that campers travel up to approximately 200 feet from the campsite to scavenge for firewood, resulting in effects to vegetation and soils (Davilla 1979).

Though small woody materials comprise a small fraction of the mass of the total downed wood in a forest, they contain most of the nitrogen, phosphorus, and potassium contributing to soil productivity (Hall and Farrell 2001). Medium-sized woody materials are important for providing conditions necessary for seed germination and establishment and survival and are also the preferred substrate for seedling establishment and subsequent growth of certain species (Cole and Monz 2002). Removing woody material larger than about 2–4 inches in diameter may alter soil conditions and establishment and survival of vegetation, lichens, mosses, and fungi. Eliminating large woody debris reduces site productivity, particularly on droughty and infertile soils (Cole and Monz 2002) and can result in a variety of negative ecological effects. Woody material increases the physical, structural, and chemical heterogeneity of the forest floor; contributes to soil organic matter and water holding capacity; and helps maintain soil stability. Decaying wood has an unusually high water holding capacity; accumulates nitrogen, phosphorus, and sometimes calcium and magnesium; and is an important site for nitrogen-fixing microorganisms. Of particular importance, ectomycorrhizal fungi (organisms that develop a symbiotic association with the roots of many plants) that improve a plant's ability to extract

water, nitrogen, and phosphate from less fertile soils, are concentrated in decayed wood. Shifts in understory species have also been documented and attributed to disturbance by firewood collection (Saunders 1979). Collecting downed wood has been shown to affect nutrient cycling for a 50–70 years (Reid et al 2005).

Direct impacts occur from the campfire itself, which alters organic matter and sterilizes soils in the fire-ring. Campfires can decrease organic matter content in soils to depths greater than about 4 inches. The severity of the impacts is related to the intensity of the fire (Fenn et al. 1976).

In some low-productivity, high-elevation forest types, fuelwood regeneration does not keep pace with its utilization for campfires resulting in various types of impacts (Davilla 1979). In general, firewood consumption exceeds productivity in high-elevation whitebark pine forests in the western United States popular as destinations for visitors (Cole 1989b). Additional impacts may occur at these campsites when available dead and downed wood is limited, and visitors resort to removing lower limbs from standing trees or snags for firewood (Cole 1989b).

Whitebark pine is an ESA Candidate species and a Forest Service Sensitive species. It is also a component of high-elevation forests—valuable aesthetically and as a paleo resource—both as living individuals and as remnant snags and down wood from dead trees. Whitebark pine exist under adverse growing conditions at high elevations and low productivity sites and typically accumulate remnant dead wood on the ground that can be much older than any living tree (frequently two or three times older). Remnant dead wood in these subalpine areas can be many thousands of years old, and a valuable resource for dendrochronologists as sources of information on past ecological or climatic dynamics. These resources can be negatively affected by localized site degradation through the consumption of very old remnant wood for campfires as well as by direct damage to the old living trees.

Remnant wood from whitebark pine can survive for millennia due to a combination of a dry cool environment, rot resistant wood, and low forest turnover rates (Stephenson and van Mantgem 2005).

Besides being on low productivity sites, these old trees and remnant wood are found at these high elevation sites because the probability of natural fire is low (a combination of infrequent fire [Caprio and Swetnam 1995; Swetnam et al. 1998] and small average area burned annually [Caprio 2004]). As a result, the probability of a tree being killed or dead wood being consumed by natural fire is much smaller than at the lower elevations.

Because this remnant wood can survive for such long periods of time, even extremely small effects, such as burning as firewood or removal, compounded over long periods, would have negative effects. Additionally, specific sites across the elevational gradient over which a species lives may have different scientific value, so effects would vary depending on location. For example, trees at the lower elevational limits of a species distribution are generally more sensitive to precipitation and so are valuable for extracting a record of past rainfall and temperature variation. At elevations above the current tree line, “ghost forests” of dead trees provide information on long-term changes in the tree line due to changing climate over many thousands of years.

Actions that decrease the amount of firewood collection would decrease effects to high elevation whitebark pine and alpine vegetation.

The death of mature cone-producing whitebark pine would result in indirect impacts by reducing the potential for future regeneration of whitebark pine stands.

Stock Use Evidence

Grazing by stock affects vegetation both through trampling and defoliation. Grazing has both direct effects on individual plants and indirect effects on vegetation composition, structure, and ecosystem processes (McClaran and Cole 1993).

Trampling effects are mechanical damage to above or below ground plant parts. Trampling can be caused by human foot or stock hoof, stock rolling and pawing, and camp activities. Trampling can reduce leaf area, plant height, and reproductive output. These effects can result in decreased vigor or death of individual plants, changes in species composition, and loss of vegetation.

The relationship between trampling intensity and vegetation impact is curvilinear: the greatest total effects on vegetation occur at low trampling intensities; additional trampling can continue to impact vegetation but at a lower rate (Cole 1987; Kuss and Hall 1991; Cole 1995a; Marion and Cole 1996; Cole and Spildie 1998). Enlargement is the most common, detrimental, ongoing change to established recreation sites (Cole 1989a). Newly used recreation sites in forested vegetation lose more than half their vegetation cover and more than 60% plant height after one night of camping. A Yellowstone National Park study found that tree-sampling density on campsites was only one-eighth of that on natural areas with no camping activity (Leung and Marion 2000). As few as 25 passes over sensitive plant types in alpine vegetation caused dramatic trampling effects and reduced plant heights in a study by Cole (1993).

In contrast, recovery rates from trampling are very low, and effects on vegetation from trampling can persist for decades in mountain environments (e.g., Hartley 1999; Willard et al. 2007). The restoration of affected recreation sites to natural conditions can require 10–30 years (Cole and Monz 2003).

Further, trampling impacts from an individual horse or mule are 6 to 10 times greater than an individual hiker, largely due to the greater force applied (Weaver and Dale 1978; Cole and Spildie 1998). Slopes are more susceptible to trampling impacts than flat ground (Weaver and Dale 1978). Vegetation types differ in their ability to resist and recover from trampling. Structural characteristics are important in determining which plant species are most resistant to trampling and how quickly they recover (Cole 1995b). The characteristics of grass-like plants make them more resistant to trampling impacts than forbs and woody plants such as shrubs and young trees (Cole 1993, Cole 1995b) and grassland and meadow vegetation may tolerate trampling better than the understory of wooded areas (Cole 1987; Cole and Monz 2002). However, meadow and riparian vegetation is especially susceptible to damage to above and below ground structures early in the growing season when soils are wet, and plants are undeveloped (Trimble and Mendel 1995).

Effects on soils from trampling can have the most severe effect on vegetation. Soils may be compacted, which decreases water infiltration, gas exchange, and rooting of plants (Trimble and Mendel 1995) that can decrease plant cover and vigor. In meadows and riparian areas, erosion and channel incision can change the hydrological characteristics that determine local vegetation patterns (Allen-Diaz 1991). Lower water tables can cause the local loss of species that depend on high water tables, resulting in a change from wetland vegetation to upland vegetation.

Trampling of vegetation by human traffic largely occurs along trails that pass through or along riparian corridors and lakeshores where visitors pass through for water or to fish or to access recreation sites and popular scenic vistas.

Actions that concentrate foot and recreational stock travel to existing trails, or concentrate campers in existing recreation sites, can decrease total impacts. Actions that affect stock users' behavior and numbers can change trampling impacts more than those that affect hiker behavior on a per-capita basis.

Defoliation of individual plants results in a reduction of photosynthetic tissues. The loss of foliage to stock grazing can decrease plant productivity (Stohlgren et al. 1989; Cole et al. 2004) and plant cover (Olson-Rutz 1996a; Cole et al. 2004).

Horses, mules, burros, and llamas are selective grazers. Under the low intensity typical of recreational grazing areas, forage availability within a meadow area generally exceeds demand, giving stock a choice in where they graze (patch grazing; McClaran and Cole 1993). The horses and mules that comprise most of the stock use strongly select for tender grass-like species (Olson-Rutz 1996a), even when these have already been grazed extensively (Fleurbaey et al. 2001). Selective grazing alters the balance of other species interactions, such as competition. Depending on the duration and intensity of grazing, selective grazing can lead to declines in the abundance of grass-like species and increases in the abundance of aggressive forb species. The establishment of shrubs or trees in meadows (e.g., Dull 1999; Berlow et al. 2002) and invasion of non-native species (discussed separately) are special cases of compositional changes that can be exacerbated by grazing. Grazing animals redistribute biomass and nutrients (Blank et al. 2006) that may also have an indirect effect on vegetation by favoring some species over others. The magnitude of effects depends largely on grazing intensity measured by how much herbage is removed. Utilization, the proportion of plant production grazed by stock, is a measure of intensity that is a good predictor of vegetation impacts (Cole et al. 2004). The total amount of grazing required to reach a given utilization increases with productivity. In alpine areas, productivity generally decreases with elevation, decreases at extremes of soil moisture, and decreases with a greater proportion of early seral plant species (Ratcliff 1985). All else being equal, the total amount of grazing that an alpine meadow can tolerate before effects occur is higher in larger meadows, at lower elevations, at intermediate moisture levels, and where there is a greater proportion of late seral species.

Decreases in productivity and plant cover have been reported to have a curvilinear relationship with grazing intensity (Olson-Rutz 1996b, McClaran 2000) but may be approximately linear within a limited range of intensity (Cole et al. 2004). Hopkinson and others (2013) and Lee (2013) found low-intensity grazing may have no detectable impact on species composition and bare ground in Sierra Nevada meadows. As grazing intensity increases, bare ground and productivity impacts may develop before changes to species composition (McClaran 2000, Cole et al. 2004). Inter-annual variation in snowpack may also interact with grazing intensity to influence effects (Lee 2013). Grazing impacts occur within a growing season but may persist after grazing ends (Olson-Rutz 1996b, Cole et al. 2004).

Different kinds of vegetation may be sensitive to different grazing impacts. Dry meadows may be more susceptible to decreased productivity and losses of vegetation cover than wetter meadows (Cole et al. 2004, Lee 2013; but see Stohlgren et al. 1989). Moist meadows may be more susceptible to changes in species composition than wet or dry meadows (Cole et al. 2004).

Actions that decrease the number of grazing stock would decrease total grazing impacts. Actions that increase grazing intensity on a site increase the potential for productivity losses, loss of total vegetation cover, and compositional changes.

Invasive Non-native Plant Species

Invasive non-native plant invasions are relatively limited in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas. Where they do occur, they could reduce the competitive and reproductive capacities of native species, alter available resources, displace less vigorous native species, shift native plant communities' composition, and result in reduced species diversity or monoculture communities.

The probability and success of invasive non-native plant establishment within the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas depends on two factors: disturbance and propagule pressure. Disturbances that reduce native plant cover and create bare soil allow non-native plant species to take advantage of the newly available light, moisture, and nutrients and become established (Richardson and Pysek 2006). Non-native plant establishment is most successful in areas of current and past natural and human-caused disturbance such as roads, trails, developed areas, stock corrals, recent fires, recreation sites, and riparian sites (Gerlach et al. 2003, Tu et al. 2013).

To establish in a disturbed site, non-native plant seeds or propagative root or stem fragments (propagules) need to be introduced to the site, and the more seeds or propagative root or stem fragments that arrive, the more likely non-native plants will establish, even in undisturbed vegetation (Von Holle and Simberloff 2005). Seeds or propagative root or stem fragments can be moved by humans on boots, recreation gear, and clothing; on vehicles and equipment; by stock; and in imported materials such as stock feeds and gravel.

Domestic and wild animals spread invasive plants through three main processes: the transport of seeds within the animal (i.e., digestive tract); the dispersal of seeds by transporting them on the outside of animals (i.e., seeds adhered to coat or hooves); and by mouth while consuming for food or caching (Gower 2008). A variety of seeds have been found to germinate from horse manure (Quinn et al. 2008) with peak passage of viable seed 2–4 days after ingestion (Vander Noot et al. 1967).

Human mediated seed dispersal can occur over longer distances than natural mechanisms. People's clothing, equipment, vehicles, and animal companions can carry seeds for great distances. A study on the dispersal of seed found seeds still attached to shoes after 16,404 feet (Pickering et al 2010).

While all recreational and administrative activities can increase the spread of invasive non-native species, those that create the most disturbance and carry the most propagules have the highest risk. Stock create more severe and extensive soil disturbance than hikers (Weaver and Dale 1978). Equestrian trails and camps have been found to have more non-native plants than those that do not allow horses (Campbell and Gibson 2001, Cole and Hall 1992; but see Marcus et al. 1998).

Alternatives that have smaller group sizes would decrease both propagule pressure and the severity of localized disturbance. Alternatives that restrict areas open to stock travel and/or reduce grazing area would have lower severity disturbance, less extensive disturbance, and lower propagule pressure, and would decrease the probability invasive non-native plant species become established.

Measures to reduce disturbance and prevent the introduction of non-native plant propagules would never be 100% successful. The chance of detecting and eradicating new introductions of invasive, nonnative plants early is higher in alternatives that restrict stock travel or reduce grazing area. To protect native ecosystems, new introductions need to be detected early and eradicated before they establish a large seed bank and develop into large infestations. The probability of detection is higher along trail corridors and at established recreation sites than in off-trail areas. The Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas have approximately 94 miles of system trail.

Potential indirect impacts associated with invasive non-native plant species infestations may include loss of wildlife habitat and loss of rangeland for grazing due to the diminished native vegetation communities, soil erosion due to shorter-lived annual species invasions, and consequent increased fire susceptibility due to dry dead stands of annual invasive non-native plant species (e.g., cheatgrass stands). Left untreated, infestations could increase, eventually eliminating the native vegetation and replacing the plant regime with an undesirable plant community.

The management of invasive non-native plant species management is further addressed in the Boise and Sawtooth Forest-wide Invasive Plant Species Treatments Draft Environmental Impact Statement (USDA Forest Service 2016).

Direct and Indirect Effects

Alternative A—Proposed Action

The types of impacts associated with vegetation that relate to recreational use and administrative activities in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas include direct removal, trampling, and grazing and the indirect impacts associated with the introduction of invasive non-native plant species, as described above. All proposed WMP goals, objectives, standards and guidelines related to the protection of soils and water would protect vegetation, as those measures would work to reduce or eliminate impacts on vegetation. Alternative A includes the following standards and guidelines that would influence the effects to vegetation:

- Limit group size to a maximum of 12 people
- Limit the combined number of recreational stock in one group to 14 head of stock
- Only allow campfires below 8,800 feet elevation and within 200 yards of Walker, Island, Upper and Lower Chamberlain (9,477 feet and 9,197 feet), and Boorn Lakes (recreational campfires would be restricted in 78,709 acres of the wilderness area [40,124 acres in Hemingway-Boulders Wilderness and 38,585 acres in Cecil D. Andrus-White Clouds Wilderness])
- Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-up sites where topography does not allow for tethering more than the 200 feet from lakes, streams, and springs.
- Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs

- Prohibit recreational stock use, with the exception of pack goats and llamas, within the following drainages: Slickenslide Creek above Quiet Lake, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Walker and Island Lakes

Alternative A would limit group size to 12 and recreational stock to 14. Based on these reductions, an increase in the area of existing recreation sites is not expected. The recreation sites that currently exist would continue to be used, except for areas where stock use and campfire restrictions occurred in the past, that use would continue to impact existing recreation sites, but would not enlarge the sites or create new sites. The group size and stock reductions would not result in a decrease in recreation sites.

Resource Indicator and Measure 1: Whitebark Pine

Campfire restrictions in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas would eliminate the collection of downed wood and vegetation trampling from the collection of firewood. Eliminating firewood collection could decrease impacts to whitebark pine, increase down and dead wood that could increase overall soil productivity supporting the habitat for whitebark pine regeneration.

Alternative A would restrict equine stock use within Slickenslide Creek drainage above Quiet Lake, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes above Island and Walker Lakes, and tethering and grazing within 200 feet of lakes, streams, and springs. This action would decrease equine stock use impacts and, in conjunction with group size reduction, reduce the impacts to whitebark pine and its habitat because the recreation site area is not expected to increase in stock restricted areas. However, effects from pack goats and llamas would continue to occur.

Impacts to whitebark pine in areas outside of the proposed group and stock reductions are expected to continue. The increase in area and new development of recreation sites particularly above 8,000 feet; tree damage; and fire and stock evidence could directly affect existing whitebark pine and create disturbance in habitat suitable for whitebark pine regeneration. The death of mature cone-producing whitebark pine could result in indirect affects to future regeneration of whitebark pine stands.

Resource Indicator and Measure 2: Alpine and Riparian Vegetation

Due to the short growing season and harsh conditions that characterize the high-elevation environment, and the slow-growing, perennial-dominated communities that comprise alpine vegetation, recovery from even minor disturbances can take a long time and signs of impacts can persist. Most of the alpine vegetation occurs in remote and inaccessible portions of the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas and is relatively free from human disturbance. Alpine lakes, passes, and vistas popular with visitors are where most trampling impacts to alpine vegetation occur.

Riparian vegetation effects could occur wherever visitor and stock use are concentrated. Most trampling effects to riparian vegetation would continue to occur in popular destinations where visitor use is concentrated. While effects along trails that pass through or along riparian corridors and lakeshores and near recreation sites can be locally severe, they are currently insignificant at the ecosystem or landscape scale and this is expected to remain the case.

Campfire restrictions in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas could reduce some trampling effects to alpine and riparian vegetation resulting from the firewood collection. The increase in down and dead wood may increase overall soil productivity, supporting diverse and resilient vegetation communities. In areas without restrictions, the potential for impacts to vegetation from firewood collection would continue.

Actions that decrease the number of grazing stock would decrease total grazing impacts. Alternative A would restrict equine stock use within Slickenslide Creek drainage above Quiet Lake, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes above Island and Walker Lakes, and tethering and grazing within 200 feet of lakes, streams, and springs. This action would decrease equine stock use impacts to alpine and riparian vegetation in these areas and, in conjunction with group size reduction, contribute to recovery of existing alpine and riparian vegetation. However, pack goat and llama impacts would continue to occur.

Actions that affect stock users' behavior and numbers could change trampling impacts more than those that affect hiker behavior on a per-capita basis.

The development of unauthorized user routes may continue to pose potential risks to adjacent riparian vegetation. However, under Alternative A, visitor education would be implemented to mitigate these impacts.

Impacts to alpine and riparian vegetation in areas outside of the proposed group and stock restrictions would continue. The increase in area and new development of recreation sites particularly above 8,000 feet; tree damage; and fire and stock evidence could directly affect alpine and riparian vegetation.

Resource Indicator and Measure 3: Invasive Non-Native Plant Species

A reduction in group size to 12 and recreational stock to 14 would decrease recreation use-related disturbance and propagule pressure, decreasing the risk of introduction and establishment of invasive non-native plant populations.

Alternative A restricts stock tethering and grazing within 200 feet of lakes, streams, and springs, and equine stock use within Slickenslide Creek drainage above Quiet Lake, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes above Island and Walker Lakes. These actions could decrease equine stock use-related disturbance and propagule pressure, decreasing the risk of introduction and establishment of invasive non-native plant populations. However, pack goat and llama disturbance and propagule pressure would remain the same.

Resource Indicator and Measure 4: ESA Candidate, Regional Foresters Sensitive, Forest Watch, BLM Special Status Plant Species

Recreation use at special plant species occurrences could affect resiliency of, or eliminate, species or reduce habitat quality. Direct removal of most Forest Service Sensitive, Forest Watch, or BLM Special Status plant species would be expected to occur only under very limited circumstances, such as collections made during research, inventory, or monitoring activities. Because these species are by definition rare, the likelihood that they would be encountered by visitors and illegally collected is considered quite low. While the potential for illegal collection

would be low under all alternatives, the collection of whitebark pine for firewood is expected to occur in areas where campfire is allowed.

Similarly, trampling of these plant species would be expected to be infrequent. Although species in the riparian area may suffer incidental trampling by visitors accessing water, this incidental trampling would not result in population level impacts.

Alternative B—Natural-Focus

The types of impacts associated with vegetation that relate to recreational use and administrative activities in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas include direct removal, trampling, and stock use, and the indirect impacts associated with the introduction of invasive non-native plant species, as described above. All proposed WMP goals, objectives, standards and guidelines related to the protection of soils and water would also protect vegetation, as those measures would work to reduce or eliminate impacts on vegetation.

Alternative B includes the following standards and guidelines that would influence impacts to vegetation:

- Limit group size to a maximum of 8 persons in Zone 1 and a maximum of 12 persons in Zones 2, 3, and 4
- Limit the combined number of pack in saddle stock in one group to a maximum of 10 animals in Zone 1 and a maximum of 14 animals in Zones 2, 3, and 4
- Only allow campfires in Zones 3 and 4
- Prohibit tethering recreational stock within 200 feet of lakes, streams, and springs, with the exception of agency provided tie-up sites where topography does not allow for tethering more than the 200 feet from lakes, streams, and springs.
- Prohibit grazing by recreational stock within 200 feet of lakes, streams, or springs
- Prohibit recreational stock use within the following drainages: Slickenslide Creek, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes, excluding Walker and Island Lakes

Alternative B is the Natural-Focus Alternative and generally proposes greater vegetation resource protection than the other alternatives. Recreational campfires would be restricted in 157,639 acres of the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas (67,867 acres in Hemingway-Boulder Wilderness and 89,772 acres in the Cecil D. Andrus-White Clouds Wilderness). Alternative B campfires restriction in Zones 1 and 2 would increase the acreage of campfire restrictions by 78,930 acres in comparison with Alternative A. Furthermore, Alternative B proposes to restrict all stock use within Slickenslide Creek drainage, Boulder Chain Lakes Creek above Lodgepole Lake, Gunsight Creek, Bighorn Creek, and Big Boulder Lakes above Island and Walker Lakes.

Resource Indicator and Measure 1: Whitebark Pine

Actions that decrease the amount of firewood collection would decrease impacts to high-elevation whitebark pine. The additional 78,930 acres of campfire restrictions for Alternative B compared to Alternative A would result in a greater reduction of impacts to whitebark pine and an increase of down and dead wood that could increase overall soil productivity supporting the habitat for whitebark pine regeneration.

The additional stock use, tethering, and grazing restrictions proposed under Alternative B would decrease all stock use impacts, and in conjunction with group size reduction, reduce the impacts to whitebark pine and its habitat. This alternative differs from Alternative A by the inclusion of Quiet Lake, and pack goat and llamas in stock restriction. The Quiet Lake area has large stands of whitebark pine, and the landscape above the lake is alpine. Eliminating pack goat and llama use could reduce impacts to alpine vegetation and increase overall soil productivity supporting the habitat for whitebark pine regeneration.

Impacts to whitebark pine in areas outside Alternative B group and stock reductions are expected to continue. The increase in area and new development of recreation sites particularly above 2438 meters (8,000 feet), tree damage, fire and stock evidence could directly affect existing whitebark pine and create disturbance in habitat suitable for whitebark pine regeneration. The death of mature cone-producing whitebark pine could result in indirect affects to future regeneration of whitebark pine stands.

Resource Indicator and Measure 2: Alpine and Riparian Vegetation

Based on reduced group size and stock numbers and increased campfire restrictions, Alternative B would result in a larger decrease in effects to alpine and riparian vegetation than Alternatives A or C.

Effects to alpine and riparian vegetation under Alternative B would be similar to the effects discussed under Alternative A but would occur to a lesser extent because group size and pack animal reductions would reduce visitor and stock pressure over a larger area. These reductions could decrease the area and number of existing recreation sites in less popular areas. The recreation sites that currently exist may continue to be used, excluding areas where stock use and campfire restrictions would occur; that use may continue to affect the recreation site, but the reduced level of users would not enlarge the sites or create new sites. In areas less popular with visitors, vegetation recovery in existing recreation sites could occur.

Campfire restrictions on an additional 78,930 acres (i.e., 78,930 acres more than under Alternative A) could reduce effects to alpine and riparian vegetation and increase down and dead wood that could increase overall soil productivity, supporting resilient native vegetation communities compared to Alternative A.

Alternative B stock use restrictions, with the inclusion of Quiet Lake and the restriction of pack goat and llamas where the landscape quickly transitions to alpine vegetation, could provide a greater decrease in vegetation effects compared to Alternatives A and C. Group size reductions would contribute to recovery of existing effects to alpine and riparian vegetation in these areas. Eliminating pack goat browse of leaves from woody species and pointed hoof action and llama grazing could reduce effects to alpine and riparian vegetation and increase overall soil productivity.

The development of unauthorized user routes would continue to pose potential risks to adjacent riparian vegetation, which would be mitigated through visitor education. Alternatives A and B propose to restrict stock tethering and grazing within 200 feet of lakes, streams, and springs. Trampling and grazing of riparian vegetation could decrease with these restrictions.

Resource Indicator and Measure 3: Invasive Non-Native Plant Species

The group size and stock restrictions and additional restrictions on areas open to stock travel and reduced grazing area under Alternative B compared to Alternatives A and C would decrease the

severity and extent of recreation use–related disturbance and lower propagule pressure and may decrease the probability invasive non-native plant species would become established.

Resource Indicator and Measure 4: ESA Candidate, Regional Foresters Sensitive, Forest Watch, BLM Special Status Plant Species

Effects to special status plant species would be similar to Alternative A, but to a lesser extent. The reduced group size and stock reductions and additional restrictions on areas open to stock travel and reduced grazing area of Alternative B compared to Alternatives A and C would decrease recreation use at occurrences of ESA Candidate, Forest Service Sensitive, Forest Watch, and BLM Special Status plant species, decreasing potential effects to resiliency or occurrences of species or reductions in habitat quality.

Alternative C—Minimum Management

Alternative C proposes no changes to the existing management prescriptions to the wilderness areas, and current group size and allowable recreational stock numbers would remain the same as the existing condition. The types of effects associated with vegetation that relate to recreational use and administrative activities in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas include direct removal, trampling, grazing, and the indirect impacts associated with the introduction of invasive non-native plant species, as described above. All direct and indirect effects currently occurring to whitebark pine, alpine, and riparian vegetation and ESA Candidate, Forest Service Sensitive, Forest Watch, BLM Special Status, and native vegetation in the wilderness areas would continue. Alternative C lacks the proactive direction presented under the other two alternatives and may lead to additional direct and indirect effects to the botanical resources, based on the larger group sizes, allowable recreational stock numbers and lack of restrictions on areas open to stock travel and grazing.

Forest Service wilderness visitation increased roughly 3.2% per year between 2005 and 2012 (Holmes et al. 2015). The Idaho Department of Labor projects Idaho's population will grow 15.3% from 2015 to 2025, an annual growth rate of 1.4%, and 64% of use in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas is from Idaho. Any substantial increase in levels of use or change in patterns of visitor use could potentially increase effects associated with vegetation that relate to recreational use and administrative activities in the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas, including direct removal, trampling, grazing, and the indirect impacts associated with the introduction of invasive non-native plant species.

Cumulative Effects

Alternative A—Proposed Action

The primary cumulative activities that have affected botanical species and their habitats on the Sawtooth NRA as well as within the north end of the Forest include permitted domestic livestock grazing and its related impacts; wildfire suppression; mining operations; treatment of non-native plants; wildlife management actions (predator control); research projects (vegetation sampling/collection, bighorn sheep research); recreation activities (dispersed and developed camping, system/non-system route construction/development, hiking, biking, motorcycle, snow machine, hunting, fishing, trapping, commercial outfitting and guiding); SAR; water diversion structures and their operation; timber harvest and fuels treatments; and personal firewood cutting.

Stock use within the Hemingway-Boulders Wilderness and Cecil D. Andrus-White Clouds Wilderness areas is a foreseeable future action that could increase cumulative effects to native vegetation and ESA Candidate, Forest Service Sensitive species, Forest Watch species, and BLM Special Status species.

Invasive non-native plant invasions could cumulatively reduce the competitive and reproductive capacities of native species; alter available resources; displace less vigorous native species, shift native plant communities' composition (including whitebark pine, alpine and riparian vegetation, and ESA Candidate, Forest Service Sensitive, Forest Watch, and BLM Special Status plant species); and reduce species diversity or create monoculture communities. Alternative A proposes smaller group sizes, which would decrease both propagule pressure and the severity of localized disturbance. Alternatives that restrict areas open to stock travel and or reduce grazing area, such as Alternative A, could have lower severity disturbance, less extensive disturbance, and lower propagule pressure, and would cumulatively decrease the probability invasive non-native plant species would become established and affect native species.

Alternative B

Cumulative effects for Alternative B would be similar to Alternative A, except would occur to a lesser extent based on the reduced group size and stock reductions and additional restrictions on areas open to stock travel and reduced grazing area of Alternative B compared to Alternative A.

Alternative C—Minimum Management

All cumulative effects currently occurring to whitebark pine, alpine, and riparian vegetation and ESA Candidate, Forest Service Sensitive, Forest Watch, BLM Special Status, and native vegetation in the wilderness areas would continue. Alternative C lacks the proactive direction presented under the other two alternatives and may lead to additional cumulative effects to the botanical resources, based on the larger group sizes, allowable recreational stock numbers and lack of restrictions on areas open to stock travel and grazing.

3.5.5. Summary

Table 18 summarizes the environmental effects of each alternative for botanical resources, vegetation and non-native plants.

Table 18. Management Summary comparison of environmental effects of each alternative for botanical resources, vegetation and non-native plants

Resource Element	Indicator/ Measure	Alternative A: Proposed Action	Alternative B: Natural-Focus	Alternative C: Minimum Management
Whitebark pine	Change in recreation site area and number, tree damage, campfire rings, or stock use evidence from existing condition	Smaller group size (12) and stock numbers (14), restrict campfires in 78,709 acres limit equine stock use area could decrease impacts to high elevation whitebark pine	Smaller group size (8 - Zone 1, 12 - Zone 2,3,4) and stock numbers (10 - zone 1, 14 - Zone 2,3,4), restrict campfires in 157,639 acres limit all stock use area could decrease impacts to high elevation whitebark pine and may allow recovery of lesser used areas	Continued current impacts to high elevation whitebark pine
Alpine and riparian vegetation	Change in recreation site area and number, tree damage, campfire rings, or stock use evidence from existing condition	Smaller group size (12) and stock numbers (14), restrict campfires in 78,709 acres limit equine stock use area could decrease impacts to high elevation whitebark pine	Smaller group size (8 Zone 1, 12 Zone 2,3,4) and stock numbers (10 zone 1, 14 Zone 2,3,4), restrict campfires in 157,639 acres limit all stock use area could decrease impacts to high elevation alpine and riparian vegetation and may allow recovery of lesser used areas	Continued current impacts to high elevation whitebark pine
Invasive non-native plant species	Increase in known invasive non-native species	Smaller group sizes could decrease both potential to introduce invasive non-native species and the severity of localized disturbance. Restricted stock travel and or reduce equine grazing area could have lower severity disturbance, less extensive disturbance, and lower potential to introduce invasive non-native species decreasing probability invasive non-native plant species would become established.	Smaller group sizes could decrease both potential to introduce invasive non-native species and the severity of localized disturbance. Restricted stock travel and or reduce grazing area could have lower severity disturbance, less extensive disturbance, and lower potential to introduce invasive non-native species decreasing probability invasive non-native plant species would become established.	Continued risk of introduction of invasive and non-native plant species and probability to become established.

Resource Element	Indicator/ Measure	Alternative A: Proposed Action	Alternative B: Natural-Focus	Alternative C: Minimum Management
ESA Candidate, Regional Foresters' Sensitive, Forest Watch, BLM Special Status plant species	Loss of occurrences and decrease in habitat quality from recreation activities	Smaller group size (12) and stock numbers (14), restrict campfires in 78,709 acres limit equine stock use area could decrease impacts to ESA Candidate, Regional Foresters' Sensitive, Forest Watch, BLM Special Status plant species	Smaller group size (8 Zone 1, 12 Zone 2,3,4) and stock numbers (10 zone 1, 14 Zone 2,3,4), restrict campfires in 157,639 acres limit all stock use area could decrease impacts to ESA Candidate, Regional Foresters' Sensitive, Forest Watch, BLM Special Status plant species	Continued current impacts to ESA Candidate, Regional Foresters' Sensitive, Forest Watch, BLM Special Status plant species

4. Consultation and Coordination

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Appendix 1—Trails within Closure Areas

Trails included in recreational equine stock and pack goat closure areas

	Trail Name/Number	Miles	Trail Class	Prohibition Area
Alternative A	Boulder Chain Lakes #683	1.95	2	Equine Stock
	Crater Lake #673	1.2	1	Pack Goat
	Walker Lake Trail #601	1.16	3	Pack Goat
	Big Boulder Trail #680	3.77	3	Pack Goat
	Slate Creek Trail #674	3.45	1	Pack Goat
Alternative B	Boulder Chain Lakes #683	2.69	2	Equine Stock

Appendix 2—Forest Plan Amendments

The general relationship between land management plans (forest plans) and plans for designated areas (such as this WMP) is described in FSH 1909.12, section 24.3. This section indicates that planning for designated areas may be met through the forest plans. Any parts of a WMP that meet the requirements of plan components must be included in the forest plan. The entire area plan does not need to be included in the forest plan. The forest plan must also be compatible with the designated area plan; if not, amendments may be needed.

Terms used in this section are consistent with the 2012 Planning Rule, and definitions may be reviewed at 36 CFR § 219.7.

As shown below, the following proposed changes would be made to the common management prescription category management direction, p. III-89, in Chapter III, Management Direction, of the Land and Resource Management Plan (revised) for the Sawtooth National Forest.

Corrections:

- Would be modified to correct reference errors.
- Would be modified to reflect current terminology.

Deleted direction: None

Other direction in this section would remain as presented in the Forest Plan and consequently, is not included below.

Management Prescription Category

Management Direction

Existing Wilderness

MPC 1.1 Standards	
Modified Standard	Management actions shall be designed and implemented in manner that protects wilderness character.
Modified Standard	Road construction or reconstruction may only occur where needed and determined to be the minimum necessary: To provide access related to reserved or outstanding rights, or To respond to statute or treaty.
Modified Standard	The full range of fire management strategies may be used to manage wildfires. When suppression actions are necessary, emphasize strategies and tactics that minimize impacts to wilderness character.

Management Area 21—Hemingway-Boulders & Cecil D. Andrus-White Clouds Wilderness

As shown below, the following proposed new direction would be established for Management Area Direction for Management Area 21, Hemingway-Boulders & Cecil D. Andrus-White Clouds Wilderness, in Chapter III, Management Direction, of the Land and Resource Management Plan (revised) for the Sawtooth National Forest.

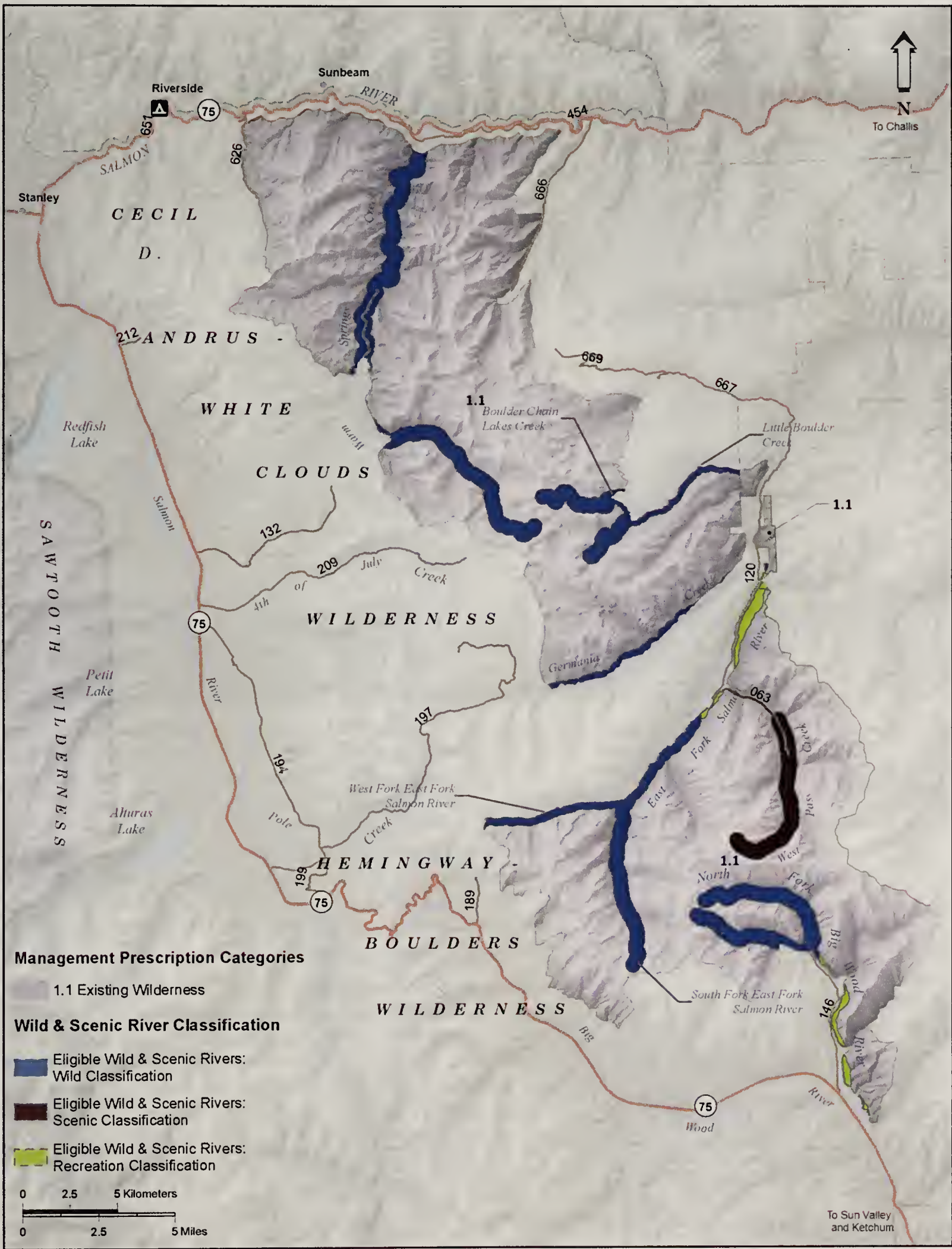
Location Map:

- The Management Area location map would be added to reflect the addition of the wildernesses

New Direction:

- Please see table below.

Deleted Direction: None



Map of Management Area 21

Management Area Description

MA 21 includes only lands designated as the Hemingway-Boulders Wilderness and the Cecil D. Andrus-White Clouds Wilderness areas.

The management approach for MA 21 is to manage the wilderness area per the approved Hemingway-Boulders and Cecil D. Andrus-White Clouds Wilderness Management Plan (DN date of decision: August 21, 2018).

Management Prescriptions—MA 21 has the following management prescription.

Management Prescription Categories for Management Area 21

Management Prescription Category	Percent of Management Area
1.1 – Designated Wilderness	100

Management Direction

Direction for Management Area 21

MPC/ Resource Area	Direction	Number	Management Direction Description – Wilderness (To be Modified by WMP amendment)
Sawtooth NRA General Management	Standards	2101	Manage lands to ensure the preservation and protection of the natural, scenic, historic, pastoral, and fish and wildlife values and to provide for the enhancement of the associated recreational values in accordance with Public Law 92-400.
Sawtooth NRA General Management	Standards	2102	Management, utilization, and disposal of natural resources on federally owned lands (such as timber, grazing, and mineral resources) shall be allowed only insofar as their utilization does not substantially impair achievement of the purposes for which the recreation area was established. (As a management approach, “Substantial Impairment” is defined as that level of disturbance of the values of the Sawtooth NRA that is incompatible with the standards and guidelines of the Forest Plan. The proposed activities shall be evaluated as to: 1) the period of impact; 2) the area affected; and 3) the importance of the impact on the Sawtooth NRA values. Use process guidance in Appendix I of the Forest Plan to assist in determining compliance with this standard.)

Management Area 03—East Fork Salmon River/White Cloud

As shown below, the following proposed changes would be made to the Management Area Direction for Management Area 03, East Fork Salmon River, p. III-141, in Chapter III, Management Direction, of the Land and Resource Management Plan (revised) for the Sawtooth National Forest.

Location Map:

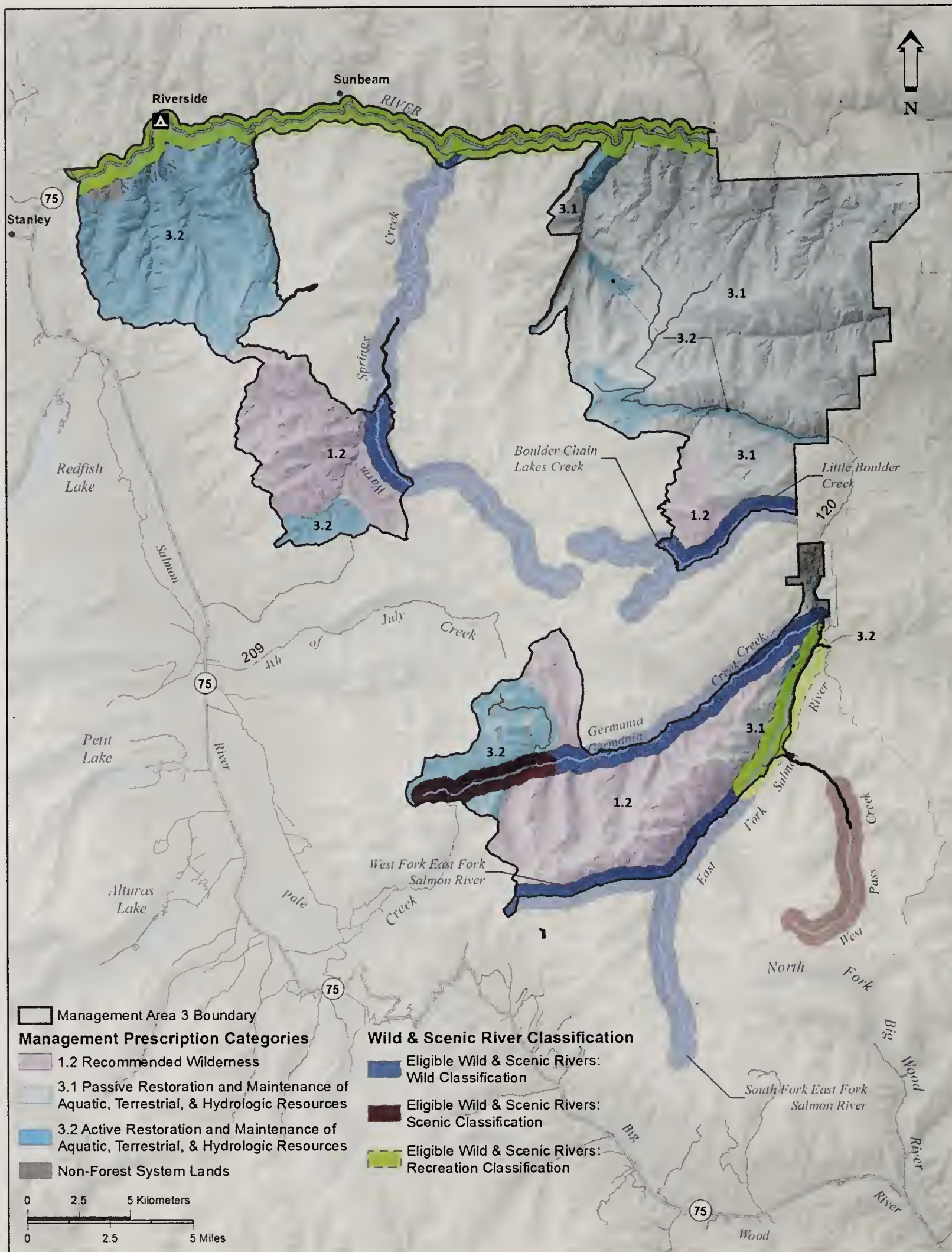
- The Management Area location map has been modified to reflect the removal of the designated wilderness areas from the unit.

Modified direction:

- Objective regarding ROS classes within the Management Area was changed to a goal, and has been revised with new percentages.
- Recreation direction was modified to remove the campfire prohibition regarding lakes that are no longer in the Management Area.

Deleted direction: None

Other direction in Management Area Description and Management Area Direction for Management Area 03 would remain as presented in the Forest Plan, and consequently, it is not included below.



Map of Management Area 03

Management Area Description

Management Prescriptions - MA 03 has the following management prescriptions.

Management Prescription Categories for Management Area 03

Management Prescription Category	Percent of Management Area
1.2 – Recommended Wilderness	29
3.1 – Passive Restoration and Maintenance of Aquatic, Terrestrial, & Hydrologic Resources	39
3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial, & Hydrologic Resources	30
Non-FS	2

Management Direction

Direction for Management Area 03

MPC/Resource Area	Direction	Number	Management Direction Description		
Recreation Resources	Goal	0373	Achieve or maintain the following ROS strategy:		
			ROS Class	Percent of Mgt. Area	
				Summer	Winter
			Primitive	0%	30%
			Semi-Primitive Non-Motorized	46%	3%
			Semi-Primitive Motorized	24%	56%
			Roaded Natural	15%	10%
			Roaded Modified	15%	1%
Recreation Resources	Standard	0305 Modified	Within recommended wilderness, the following are prohibited:		
			<div><div>a)</div><div>Having greater than 20 persons in a group.</div><div>b)</div><div>Being in the area with a combined number of recreational stock in excess of 25 animals.</div><div>c)</div><div>Shortcutting trail switchbacks on foot or with recreational stock.</div><div>d)</div><div>Tethering recreational stock within 100 feet of springs, lakes, or streams.</div><div>e)</div><div>Tying recreational stock to live trees for period longer than one hour.</div></div>		

Management Area 04–Big Wood River

As shown below, the following proposed changes would be made to the Management Area Direction for Management Area 04, Big Wood River, p. III-154, in Chapter III, Management Direction, of the 2003 Land and Resource Management Plan (revised) for the Sawtooth National Forest.

Location Map:

- The Management Area location map was modified to reflect the removal of the designated wilderness areas from the unit.

Modified direction:

- Objective regarding ROS classes within the Management Area was changed to a goal, and has been revised with new percentages.

Deleted direction: None

Other direction in Management Area Description and Management Area Direction for Management Area 03 would remain as presented in the Forest Plan, and consequently, it is not included below.



Management Area Description

Management Prescriptions - MA 04 has the following management Prescriptions.

Management Prescription Categories for Management Area 04

Management Prescription Category	Percent of Management Area
1.2 – Recommended Wilderness	10
2.2. – Research Natural Areas	<1
3.2 – Active Restoration and Maintenance of Aquatic, Terrestrial & Hydrologic Resources	3
4.1c – Maintain Unroaded Character with Allowance for Restoration Activities	64
4.2 – Roaded Recreation Emphasis	20
4.3 – Concentrated Recreation	<1
6.1 – Restoration and Maintenance Emphasis within Shrubland & Grassland Landscapes	<1
Non-FS Lands	2

Management Direction

Direction for Management Area 04

MPC/Resource Area	Direction	Number	Management Direction Description		
Recreation Resources	Goal	0470	Achieve or maintain the following ROS strategy:		
			ROS Class	Percent of Mgt. Area	
				Summer	Winter
			Primitive	0%	2%
			Semi-Primitive Non-Motorized	9%	5%
			Semi-Primitive Motorized	53%	87%
			Roaded Natural	20%	6%
			Roaded Modified	18%	0%

See project record for Appendix 3—Response to Comments, HBWC Wilderness Plan

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Fall Sunset in the Hemingway-Boulder Wilderness. Photography © Nils Ribi

